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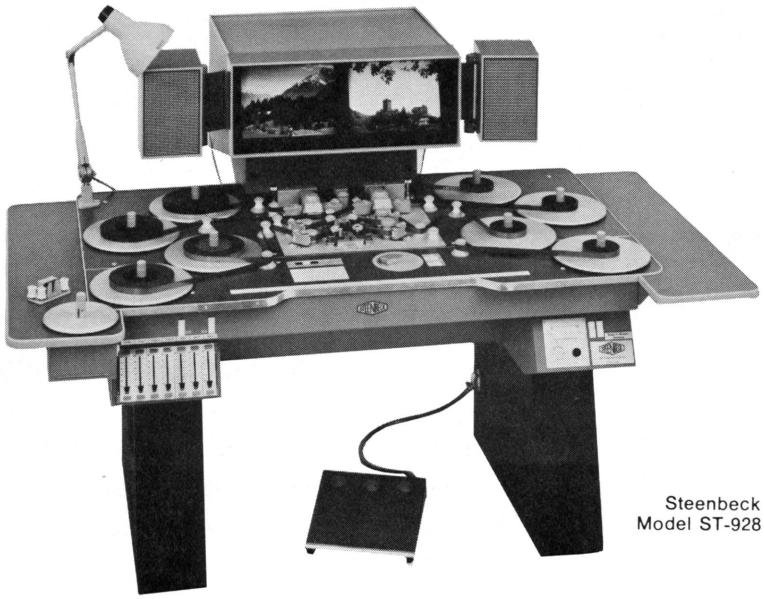

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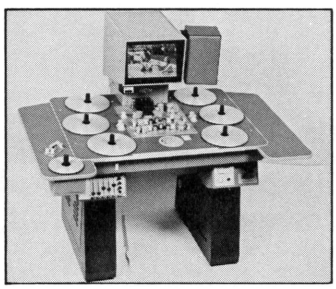

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THE BOOKSHELF

By GEORGE L. GEORGE

GENRES AND TECHNIQUES

All aspects of narrow gauge filmmaking (8, Super 8 and 16mm) are expertly covered in THE BOOK OF MOVIE PHOTOGRAPHY by David Cheshire. While designed essentially for the nonprofessional cameraman, it contains a wealth of information and advice that go beyond that category in clearly written and well-illustrated chapters on camera, film, lighting, sound, special techniques, processing and editing (Knopf $22.50).

Two recently published "films in print" underline contrasting trends of cinema art. Released in 1948, THE NAKED CITY, scripted by Albert Maltz and Malvin Wald and directed by Jules Dassin, is the prototype of realistic dramas done in semi-documentary style (So. Illinois U. Press $12.95/4.95). The current zany comedy, 1941, brilliantly photographed by William A. Fraker for director Steven Spielberg with script by Robert Zemeckis and Bob Gale, epitomizes the present escapist trend of fantasy sci-fi (Starlog $2.95).

The extent to which film and television have supplanted traditional aspects of theatrical art is surveyed in AMERICAN POPULAR ENTERTAINMENT. Ably edited by Myron Matlaw, this well-researched and instructive volume reviews such forms as vaudeville, ethnic comedy and the circus, and their survival in today's mass media (Greenwood Press $25).

The presentation in films and on television of the nature and manifestations of excessive drinking is discussed in informative essays collected in IMAGES OF ALCOHOLISM by editors Jim Cook and Mike Lewington (N.Y. Zoetrope $6.75).

★ ★ ★

CELEBRITY ROW

Former MGM production chief Dore Schary recalls in HEYDAY the turbulent, bewildering and creative 1948- to 1956 years when he fought, often successfully, to raise the quality of the films and the spirit of his collaborators. An intimate, candid autobiography, it evokes honestly a critical period of Hollywood history (Little Brown $14.95).

A sensitive study by Maurice Yacowar,

LOSER TAKE ALL, analyzes Woody Allen's comic art in a probing survey of his films, writing, and acting, while linking Allen's unique flair for sophisticated and topical comedy to his basically pessimistic outlook on life (Ungar $10.95).

In COOP: THE LIFE AND LEGEND OF GARY COOPER, Stuart Kaminsky draws on recollections by Charlton Heston, Patricia Neal, Frank Capra, Richard Widmark and others for a rather pallid portrait of an engaging but aloof personality (St. Martin's $10.95).

George Burns' new book of memoirs, THE THIRD TIME AROUND, is a delightful potpourri of intimate recollections, hilarious anecdotes and show biz vicissitudes in the career of the 83-year-old comedian (Putnam $10.95).

In ELVIS, WE LOVE YOU TENDER, the performer's stepmother Dee Presley and her sons Billy, Rick and David Stanley provide many new and lurid details of Elvis' life. Fans will lap it up, but more detached readers may flinch (Delacorte $14.95).

Cecil Beaton, who contributed his multifaceted talent to film as well as other entertainment arts, left extensive diaries that Richard Buckle selected and edited in SELF PORTRAIT WITH FRIENDS. Celebrated personalities, significant events and perceptive appraisals crowd this volume with unique charm and fascination (Times Books $17.50).

Three studies of noted directors include Annette Insdorf's FRANCOIS TRUFFAUT, a perceptive study of the cyclical nature of his film subjects (Morrow $4.95); editor Phil Hardy's RAOUL WALSH assesses the scope of the veteran director's work and the versatility of his talent (N. Y. Zoetrope $4); and Rosalind Delmar's JORIS IVENS presents an overview of the half-century career of the Dutch documentarian and his creative handling of this demanding genre (N. Y. Zoetrope $8.25).

The art of film comedy as practiced by 60 top exponents of the style is surveyed in THE FUNSTERS, a comprehensive and well-researched volume by James Robert Parish and William T. Leonard. It contains a wealth of data and evaluations that add up to an estimable reference source on the subject (Arlington $30).

Marianne Sinclair creates, in THOSE WHO DIED YOUNG, a popular pantheon of entertainment cult figures (Rudolph Valentino, John Garfield, Marilyn Monroe) and other public personalities (Kennedy, King, Guevara) who vanished from the scene before reaping all the rewards of their accomplishments (Penguin $9.95).

★ ★ ★

VIDEO VARIETIES

The proliferation of television courses in educational institutions has prompted Donald L. MacRae, Michael R. Monty and Douglas G. Worling to produce a useful and practical primer, TELEVISION PRODUCTION, as an introduction to the craft. The book's coverage is thorough, the text explicit and the illustrations plentiful (Methuen $8.50).

Video's cultural role is explored in READING TELEVISION, a thoughtful work by John Fiske and John Hartley. Their "reading" (i.e. analysis) uses a semiotic-derived method that considers elements of popular shows in order to understand TV's function as a social ritual that supersedes individual distinction to reach its collective self (Methuen $12.50/5.95).

Nina David's invaluable reference work now in its 4th annual edition, TV SEASON 1977-78, lists all nationally broadcast shows with full production and release data, helpfully cross-indexed by categories (Oryx Press, 2214 N. Central Ave., Phoenix, AZ 85004; $15.95).

Some 15,000 video programs for rental or sale are listed in THE VIDEO SOURCEBOOK ($19.95), a computerized compilation of cassettes and discs for entertainment, information and education. A companion volume, THE VIDEO PROGRAM INDEX ($6.95), lists over 400 distributors of such shows (National Video Clearinghouse, Box 3, Syosset, NY 11791; $22.95 for both volumes).

The way television was in its formative years—between 1948 and 1963—is recalled with verve and affection in PRIME TIME, a nostalgic inside look by Marlo Lewis, co-producer of the Ed Sullivan show, and his wife Mina Bess Lewis (Tarcher/St. Martin's $10).

The television industry is discussed in depth in two revealing volumes. THE NETWORKS by A. Frank Reel exposes the monopolistic policies of the Big 3 and offers reasonable alternatives (Scribners $8.95); in INSIDE THE TV BUSINESS, edited by Steve Morgenstern, ten top-drawer executives disclose the industry's questionable practices in advertising (Sterling $14.95). ■

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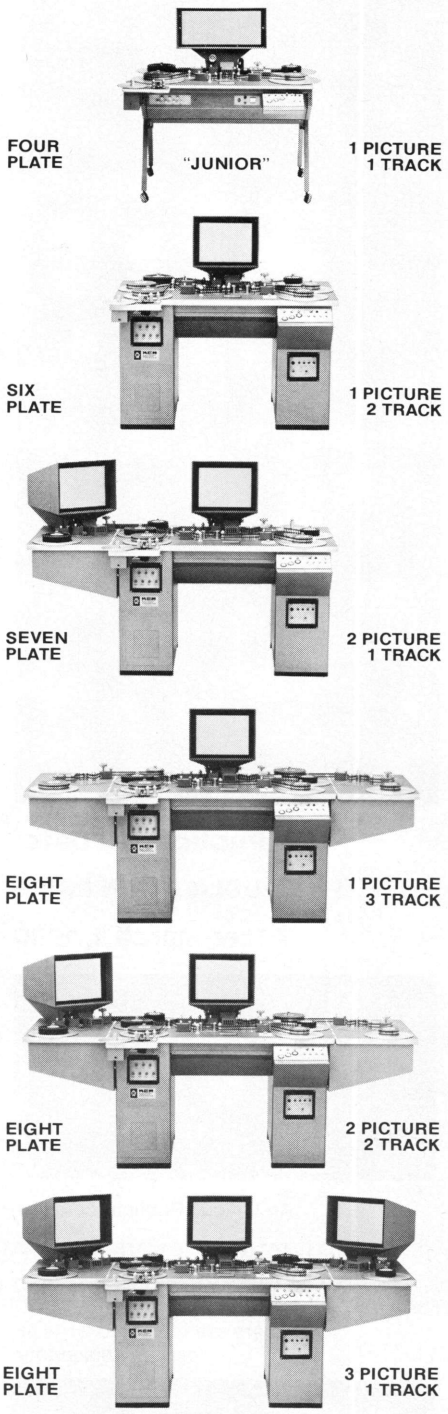

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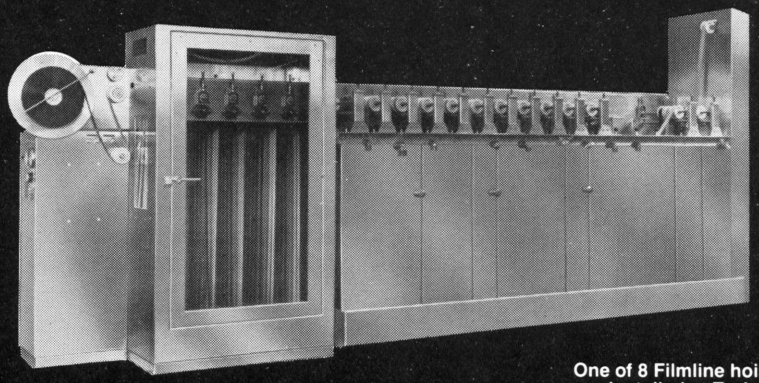

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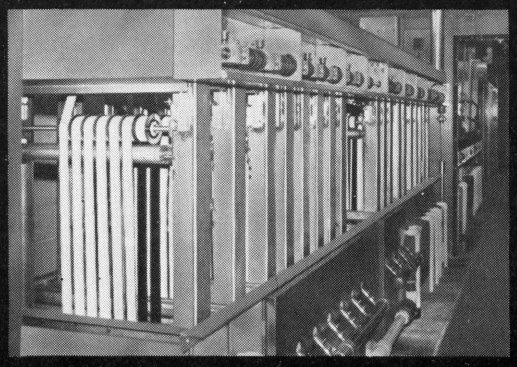

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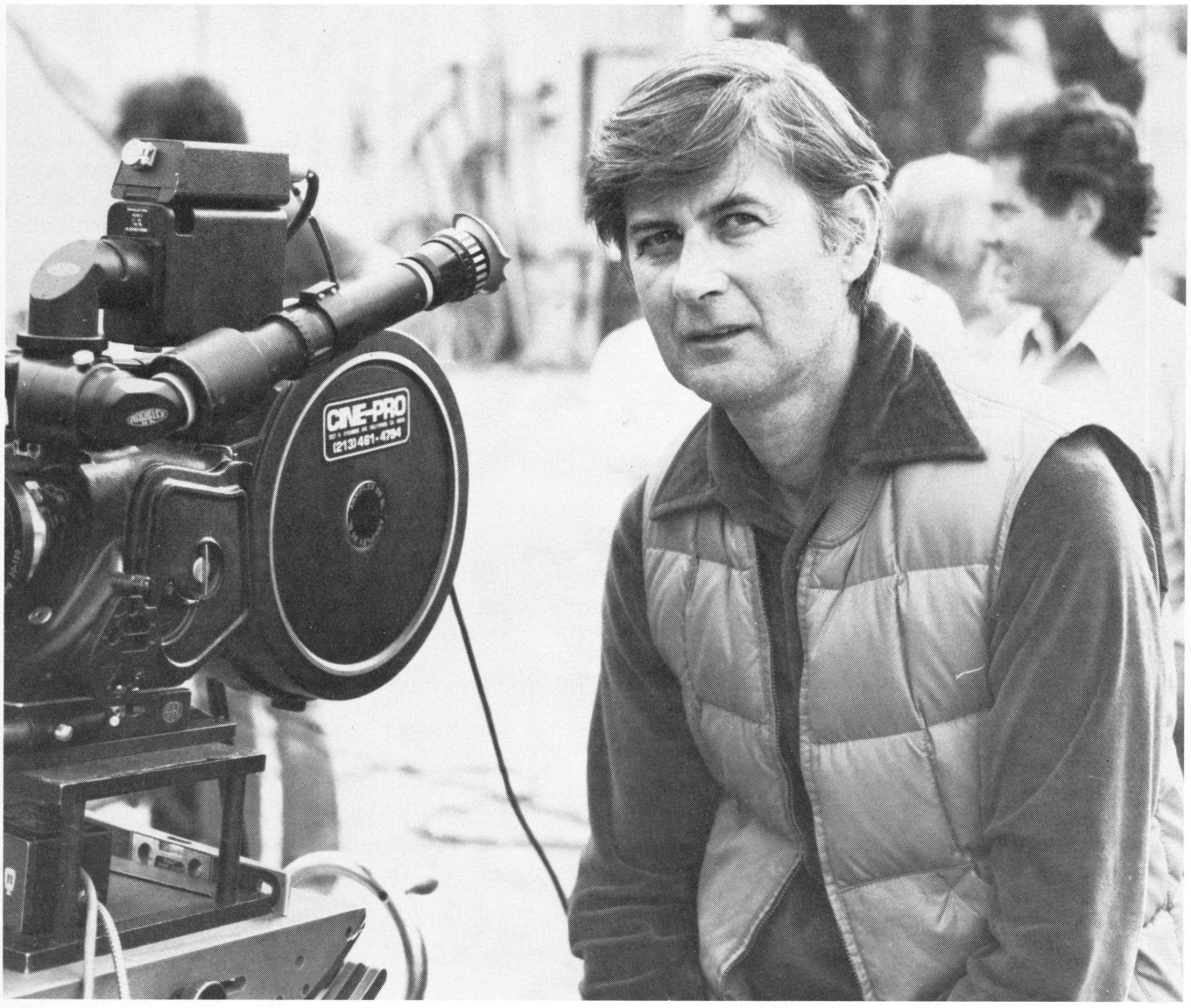

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on filming with Rick Levine Productions:

"Filming a TV commercial with Rick Levine is a lesson in efficiency. Rick says, 'Okay, kids, I want to shoot,' and with those words all the elements in front of and behind the camera snap into smoothly coordinated action. Rick gets the most and best from his talent in a precise and rapid succession of takes. No wasted time or motion. No frantic pressure. To produce a film with that kind of unhurried efficiency requires a totally dependable support system of crew and equipment; fast, sure, and always ready to roll without delay when the director gives the word. That's why I choose Cine-Pro for equipment. They know the importance of that support system — how vital it is to the cinematographer — and they never let me down."

Ed Brown is a modest man. He doesn't talk much about his own work. But then, he doesn't have to; it speaks for itself. Like the outstanding film that won him the Emmy Award, *"Eleanor and Franklin."* And *"Blind Ambition."* And *"F. Scott Fitzgerald and the Last of the Belles."* And a long list of similarly outstanding pictures he has shot in twenty years behind the camera, in practically every corner of the world. Ed devotes the same concentration and professional skill to a ten-second commercial as to a multi-million dollar feature. We do the same at Cine-Pro. Like Ed Brown, we believe that actions speak louder than words.

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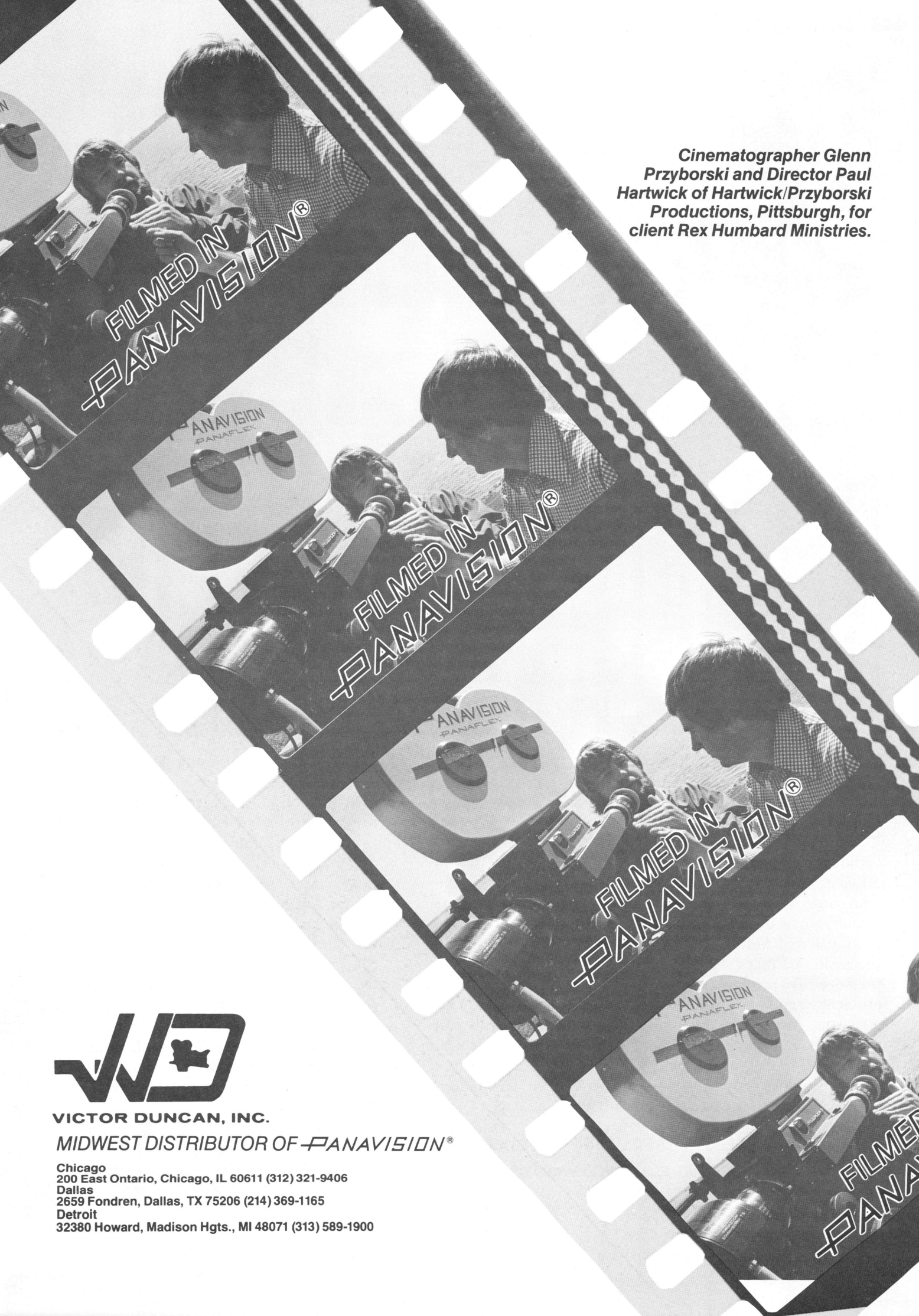

Cinematographer Glenn Przyborski and Director Paul Hartwick of Hartwick/Przyborski Productions, Pittsburgh, for client Rex Humbard Ministries.

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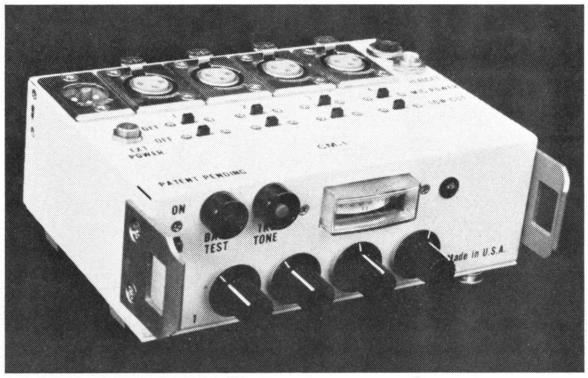
CINETRONICS

CM-1 MICROPHONE MIXER

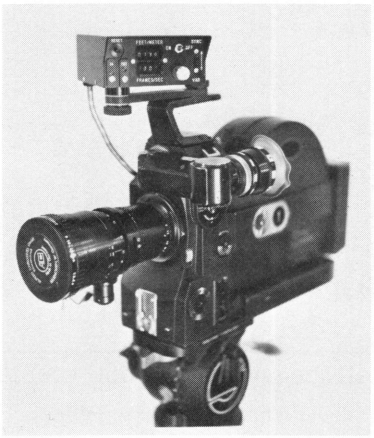


The CM-1 operates on two 9-volt batteries or external power 9 to 20 volts with + or – ground. The CM-1 also supplies 12 volts AB power (12 volts phantom power available) for shotguns. All audio connectors are standard XLR. Balanced inputs have individual low-cut equalization—12 db at 50 cycles. The output is switchable to balanced mike level or balanced line level. Features VU meter, line-up tone, battery test and LED peak indicator (adjustable).

The CM-1 Mixer offers completely new, non-visual distortion control system for one-man camera and sound work. This unique system for audio level control without VU meter monitoring provides a distortion-free output to a film or video recorder at a consistent level for best audio without utilizing automatic level control. Unlike many mixers which use an intermediate audio stage for a headset monitor, the CM-1 processes the last audio stage of the amplifier before recording through a clipping circuit which induces easily detected distortion in the headset circuit only. This distorted audio is actually 12 dbs before the level at which distortion will occur on the tape. By reducing gain until this distortion is not heard in the headset, the operator restores his 12 dbs of head room before audio quality is affected on the tape.

The size is 6.5" x 2" x 3.5". Weight is 31 ounces. Frequency response is 40 Hz to 18 Khz ±- 1 db.
Custom versions available.
List price: $850
6 month warranty

DIGI-TACH



Variable speed unit/footage-meter counter and tachometer for Arri 16 SR.

The Digi-Tach is housed in a solid, black anodized and engraved aluminum housing which attaches to the handle of the Arri 16 SR. All electrical connections are made through the accessory socket.

The variable speed unit allows speeds from 6 frames per second to 72 frames per second or crystal speed.

The footage counter is switchable to meters and has a built-in memory battery which automatically recharges when the unit is on. A full charge supplies 1,000 hours of memory power or 100 hours for every one hour of charge.

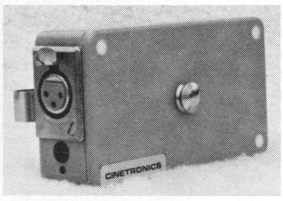
The tachometer is crystal controlled. Due to the signals available from the camera, the counter has to be switched to 24/25 frames per second when switching the camera to 24/25 frames per second.

In the variable speed position, the tachometer displays the speed selected without the camera running. Two decimal points light up to indicate a stopped camera. When the camera is started, the tachometer will indicate the actual camera speed which is usually the same as selected, except when the battery is low.

Plug-in modules will be available shortly to interface the Digi-Tach to the 16 BLEQ and the new 16 SR High Speed. A module will also be available to sync the camera with American television.

Total power consumption, including charge current, is 150 mA. For easy servicing, the unit is designed in modular plug-in technique.

List price: $995.
Six-month warranty.
35 BL Module: Converts the Digi-Tach for use with 35 BL I and BL II. List price: $300, including mounting brackets.



12-VOLT AB POWER SUPPLIES

for microphones pulling 5 to 7 mA. (Sennheiser 415-815)

All models include a belt hook and feature true balanced in and outputs. Twist-lock battery cover allows fast battery change. Built-in battery test LED lights when input is connected to output. Uses two standard 9-volt radio batteries. The unit is automatically off when microphone is unplugged. Model CS-2 also features a built-in slide-switch activated 10 db attenuator and a low-cut -1 db at 100 Hz, -12 db at 30 Hz.

List price: CS-1 P (RD) $65; CS-1 M (RD) $75; CS-2 P (RD) $85; CS-2 M (RD) $98

3-year warranty on electronic parts and labor; connectors and switches, 90 days.

CINETRONICS

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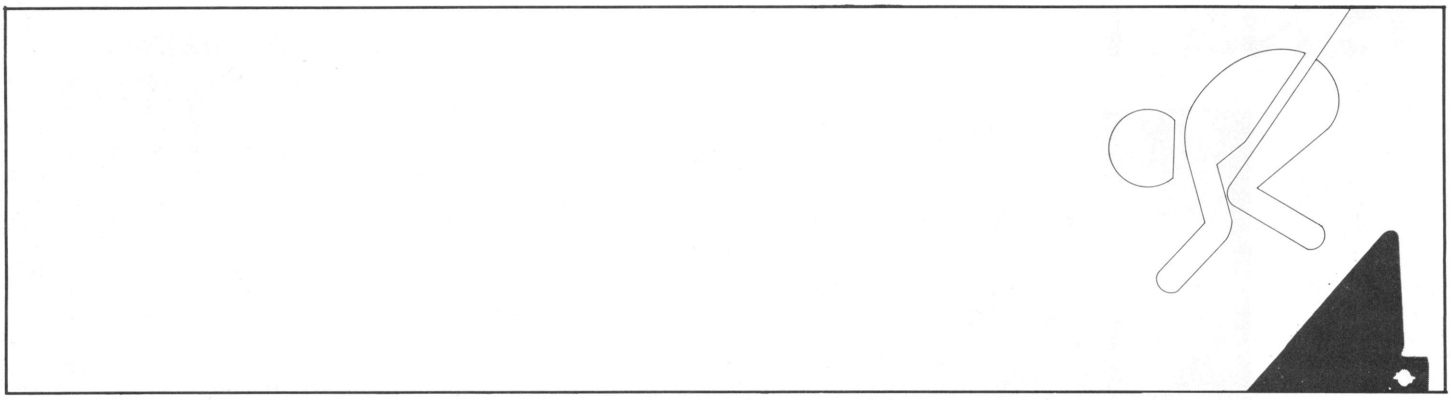
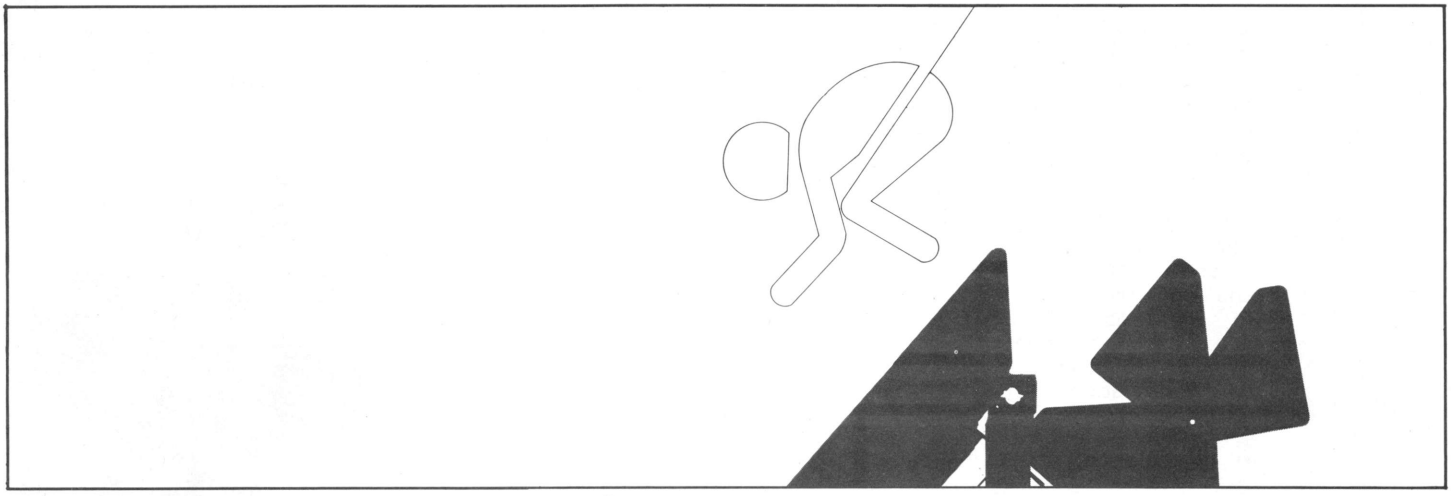
We would like to thank the following individuals and companies for their help which has made our CM-1 Mixer and other products a big success:

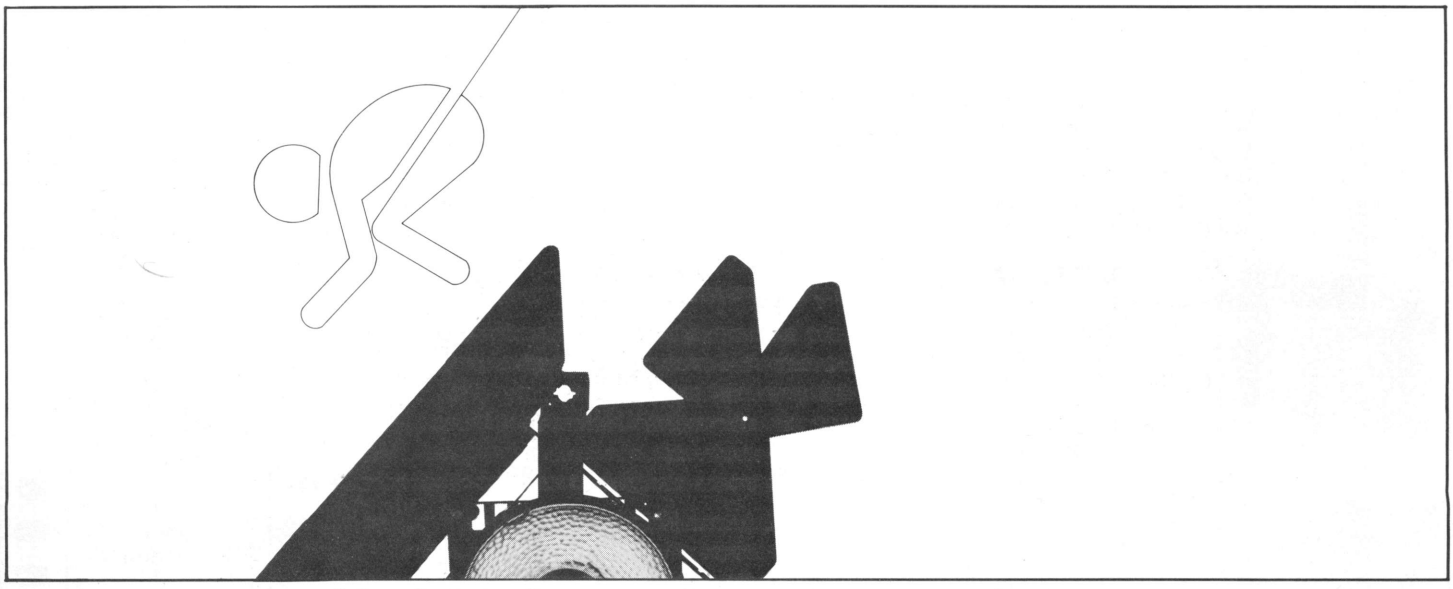
Axel Broda, Arriflex Service; Wolfgang Reigl, Arriflex Corporation; Dick Johnson, CBS News; Mike and Beverly Hoover; Romano Zihla, Zihla Enterprises; Bob Lorentzen; Peter Narins, UCLA; Dennis and Pat Remick; Otto Nemenz, International; Audio Services Company; Frank Kelly, Alan Gordon Enterprises; RB Chenoweth Films; Broadcast Equipment Corp.



Lowel Location Lighting Systems were the only lights selected by the Lake Placid Olympic Organizing Committee for



all the news/interview events at the Olympics. "Their great performance and dependability were the main reasons



we chose Lowel equipment." Jack La Duke, Cameraman & Director of Audio Visual Services, XIII Winter Olympic Games.

Lowel. One of the many outstanding performers of the XIII Winter Olympics.

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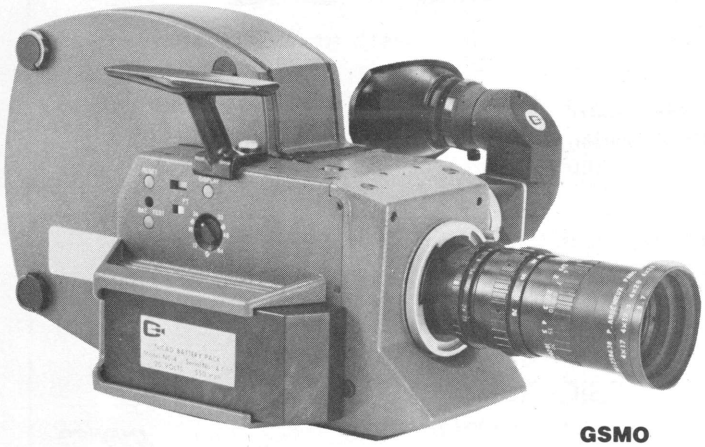
Cinema Products, the master of design innovation, has now developed *the system*. First the CP-16 . . . then the CP-16 R/A and now the GSMO. With the addition of the GSMO, Cinema Products now offers the entire range of 16mm news, documentary, industrial and production cameras. You can select a camera to meet your needs exactly. The CP-16 . . . the GSMO . . . the choice is yours.



GSMO

...And Yet Compatible

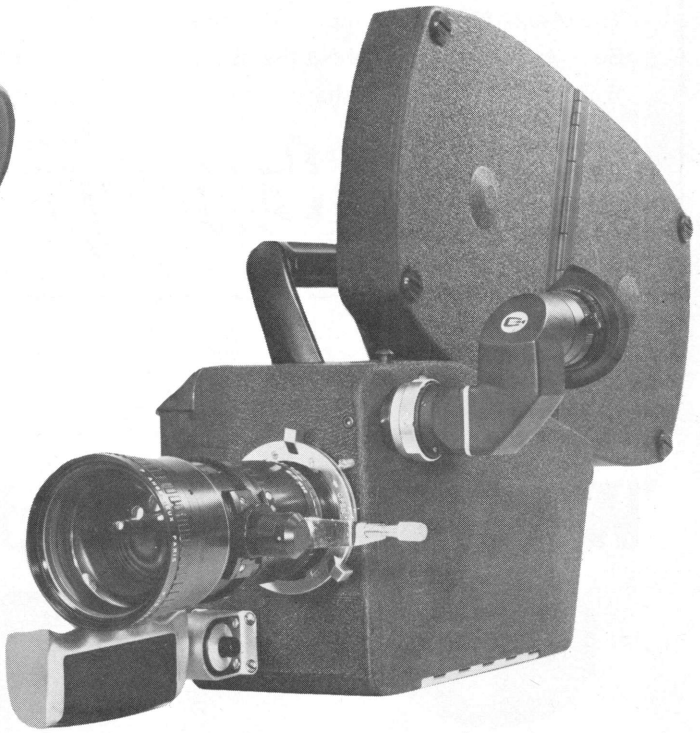
For all their differences (why, they don't even look alike), the CP-16R and the GSMO are *totally* compatible. How could it be a "system" otherwise? Interchangeable accessories make them a brace of cameras which will satisfy 90% of the needs of any professional filmmaker. What's interchangeable? The battery and charger system. The viewfinder system. The complete line of BCP mounted lenses. Once again . . . function precedes design, making the CP-16R and the GSMO the most economical system available.

Innovative design is great, but without function would you buy it? The CP-16 and the GSMO make up a system with today's filmmaker in mind. And what a system! What a choice!

Distinctly Different...

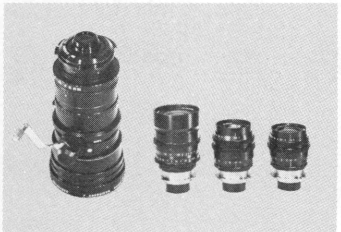
The CP-16 was conceived to overcome the problems of news cameramen in the field, thus function became the master of design. The CP-16's system capabilities are unparalleled; in many ways, its ease of operation has changed the course of television journalism. Today, the CP-16 is regarded as the world's foremost news-gathering motion picture camera.

Now, the all new GSMO steps into the world of technology of the 80's. More compact, lighter and with a lower profile than its predecessor, the GSMO is a double-system camera with instant-change magazines. So quiet . . . so easy . . . so fast . . . You must handle it to believe it!

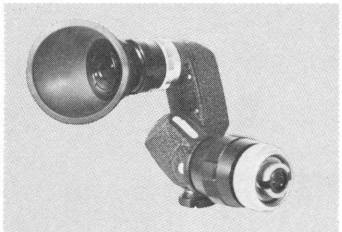


CP-16R-A

COMPATIBLE ACCESSORIES AND OPTIONS:



Prime & Zoom lenses



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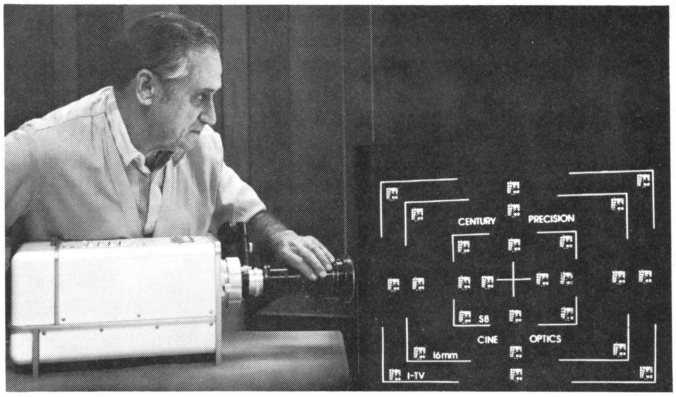
HOW SHARP IS SHARP?



When you bought that special lens, you probably took the manufacturer's word that it was sharp. And it probably was.

But just how sharp is "sharp"?

At Century we can increase the resolving power—or sharpness—of a camera lens a significant amount. Each optical component of the lens is adjusted to its most critical position by experienced Century optical technicians on our exclusive test equipment, which includes a 3000mm Collimator and specially-designed test projector.

The result? Noticeably improved optical performance.

So if you're concerned about the degree of sharpness in your lenses, bring them to Century.

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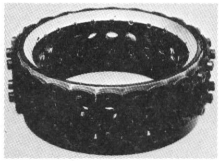
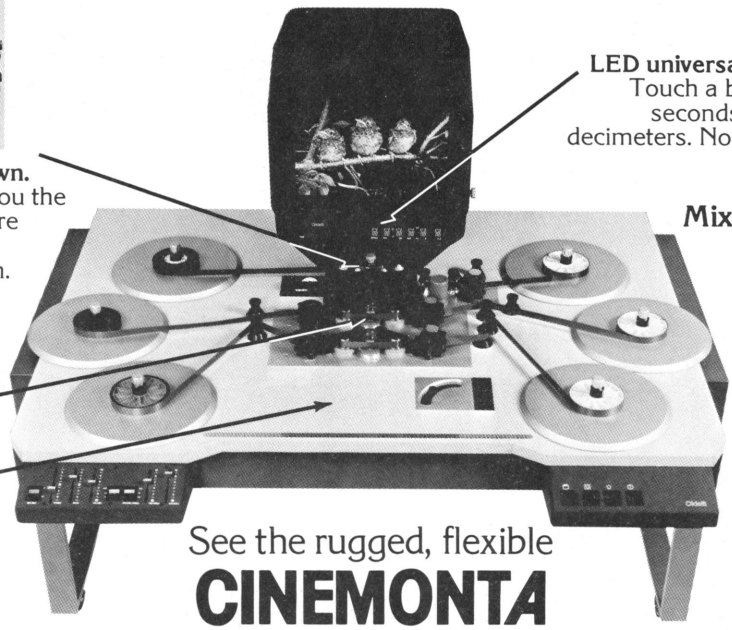


Flicker-free optical crown. 24 tiny objectives give you the sharpest, brightest picture in the industry— projection quality, 60 lines/mm. There's nothing like it in editing systems today.



LED universal counter with memory. Touch a button and read minutes, seconds, feet, frames, meters or decimeters. No more conversion tables!

Mix sound quality, too. So stable, clear and full, sound engineers in Europe **mix** right off the table for television broadcast.

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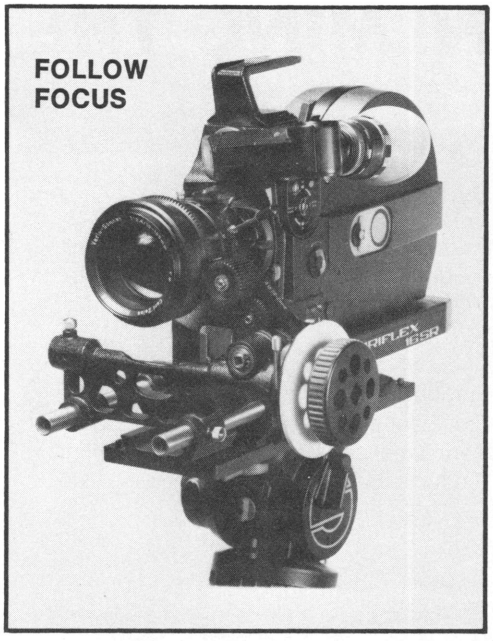
New Arriflex products at the SMPTE Conference Exhibit last October:

Seven items: three of them for both cinematography and video.



Follow-focus system: full production capability, interchangeable for all ARRI cameras. ▫ HMI daylight-balance lights from 200 watts to 4000 watts, with new, economical distribution system.

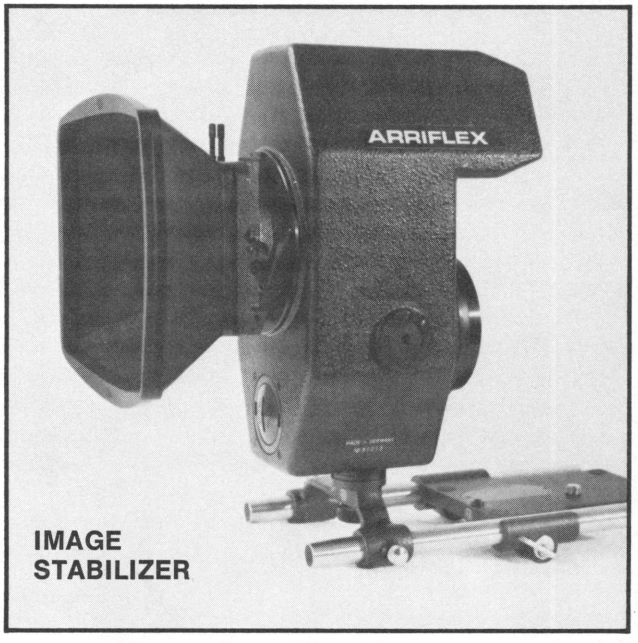
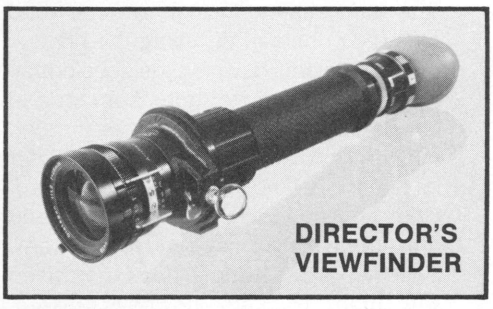
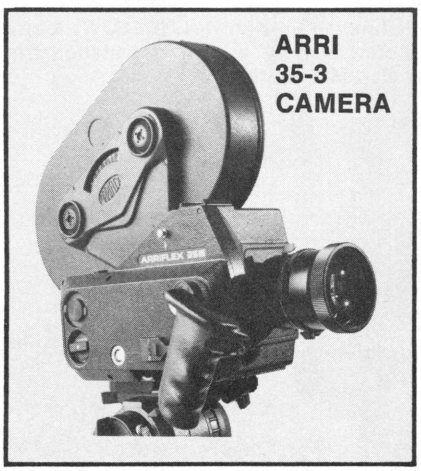


Image Stabilizer mounts on front of lens, usable with a wide range of film and video cameras. Makes steady shots possible, despite shocks or vibration. ▫ Director's Finder lets you look through the taking lens. ▫ Sachtler fluid heads, tripods and accessories—a complete system for film and video cameras.





16SR High-Speed gives you 10 to 150 fps, continuously variable. ▫ 35-3 camera: 2nd unit camera, complements the 35BL. Uses same lenses.

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FILMING THE "HELL ON WHEELS" SPOT

A three-and-a-half-minute television commercial to publicize Cher's new record album involves almost as many intricate techniques as a feature film, but turns out to be a montage of spectacular images

By ROGER FLINT

Casablanca wanted a three and a half minute film to illustrate Cher's single, *"Hell on Wheels"* from her new album, *"Prisoner"*. It was a project featuring Cher, which they needed in a hurry for European television. Chris Whorf, Vice President of Creative Services at Casablanca, called our company, Roger Flint Productions, and set up a meeting. He said, "Listen to the song and tell us what you would like to do. Make it outrageous!"

What fun. A chance to work with Cher, with a song we like a lot, and the creative freedom to be as "outrageous" as possible!

In the song, Cher sings: "Well I'm hell on wheels, I'm a roller mama. If you see something you like, you better go for it. If you see something you want, you better get down on it!"

We wanted the film to be as "hot" as the lyrics and sound. We came up with three different concepts. Michael Bottero, our company Production Manager, and I then met with Cher, Bill Sammeth, her manager from Katz, Gallin, Morey Management Company, Chris Whorf from Casablanca, and Bob Esty and Larry Emerine, Cher's record producers, and told them our three ideas. They chose one idea (the one we liked best, too). It was naturally the most complicated of the three to execute.

This was the idea: Cher would skate down a country road with smoke coming out of her skates, singing "Hell on Wheels". Two truckers in a big semi would pull in behind her and follow her down the road. She lures them on, in a seductive, singing, roller skating dance. She then skates through a wood road barricade. Instead of hitting the brakes, the driver slams down on the accelerator, and the speedometer goes from forty to one hundred. The truck smashes through the barricade and pieces of wood splinter in the air behind her (in slow motion). Cher continues to sing, "Come on and rocket with me; I'll make you feel so free". She then skates into a truck stop filled with men. Truckers, cowboys, bikers, surfers, policemen (different types, about fifty men), all become mesmerized by her very presence. We wanted this scene to be as fun and bizarre as possible. In the actual production, we had two female impersonators, (which Cher uses in her act) James Cooper, impersonating Diana Ross, and Kenny Moocha as Bette Midler. Cher sings, "Come on and roll with me!" And they do! Fifty men, including the two impersonators, jump into their trucks, cars, on their motorcycles, (slam down their beer bottles) and follow her. Wheels turn, dust kicks, and this bizarre herd of vehicles forms a huge caravan behind her.

Everyone in the meeting loved the idea. So we started the production.

We had three weeks to deliver a finished 2" tape master (525, NTSC) for the United States and a 2" tape master (625, PAL) for Europe. There was a lot to be organized and pulled together in the short one-week prep time. Denise Wintroub and Chrystine Anderson worked in the around-the-clock marathon, handling

Roger Flint, producer/director of the "HELL ON WHEELS" spot for Casablanca Records, checks out a problem on location with sound technician Ed Knowles. (BELOW) A small dark green Ranger station was converted into a convincingly "funky" gas station/truck stop in the Malibu Creek State Park location by Dan Malmouth.

(ON THIS PAGE:) Vignettes of the filming of the "HELL ON WHEELS" spot on location, with Cher in bizarre costume and smoke coming out of her roller skates. Despite a last-minute ban on filming in Malibu Creek State Park and the logistics of coordinating almost 100 cast and crew members, plus 35 on-camera vehicles, the spot is a gem of the filmmaking art. (RIGHT) Producer/director Roger Flint spared no effort or expense to make the spot outstanding.

casting, styling, and organizing vehicles and crew under the supervision of Production Manager Michael Bottero. They did a terrific job!

For our location, we needed a rural road with a country-type gas station. The position of the sun was one of my most important considerations when choosing the final location. I wanted Cher to be backlit throughout the entire shoot, with dazzling light always outlining her. Dan Malmouth (our location man) looked everywhere for a suitable spot. He found

Continued on Page 262

BEHIND THE CAMERA ON "THE NUDE BOMB"

Not quite as racy as its title suggests, this spoof on the James Bond spy capers is a zany romp involving clones, clowns and robots

THE NUDE BOMB is a Jennings Lang Production of a Leonard B. Stern Presentation for Universal based on a story and screenplay by Arne Sultan, Bill Dana and Leonard B. Stern. Jennings Lang produced, Clive Donner directed, and Harry Wolf, ASC, served as Director of Photography.

Don Adams stars. The cast also includes Sylvia Kristel, Rhonda Fleming, Dana Elcar, Pamela Hensley, Andrea Howard, Norman Lloyd, Bill Dana, Robert Karvelas, and Vittorio Gassman as Nino Salvatore Sebastiani.

The seemingly bumbling but always successful Secret Agent 86, Maxwell Smart, is called back into service by a top U.S. agency known as the "PITS" when the entire world's television broadcasts are interrupted by this omnipotent message:

"This is KAOS . . . . We have in our power a devastating new weapon capable of systematically destroying all known fabrics which exist in the world. It is called the Nude Bomb . . . ."

This sets the premise for THE NUDE BOMB, a major theatrical motion picture based on the famous character still being seen by millions throughout the world. Secret Agent Smart's current mission in the multi-million-dollar production is to stop his major adversary KAOS from turning the world stark raving nude.

Maxwell Smart utilizes an arsenal of ingenious tactical weaponry; one of which is a D-1 Turbocharger DESKMOBILE that really works. The desk blotter folds up into a windshield and dashboard, and Maxwell Smart was able to cruise it at an extremely swift pace.

Director of Photography Harry Wolf, ASC, on the set of THE NUDE BOMB with director Clive Donner, whom he calls "a cameraman's director."

During the filming of THE NUDE BOMB, Don Adams had to drive the Deskmobile on actual city streets in downtown Los Angeles during broad daylight. The funny thing was that *no one,* pedestrians and motorists alike, reacted to this strange sight of a desk signaling, changing lanes, passing other cars and stopping at red lights.

In his race against time, Maxwell Smart travels from Washington to New York to San Francisco, Monte Carlo, Innsbruck and other exotic locations. Actual photography took place at locations that included Snowbird, Utah, for skiing sequences; Los Angeles International Airport covered with real as well as artificial snow doubled as the Innsbruck, Austria, terminal.

Another unusual location for filming became an outrageous one with little if any set dressing—the Universal Studios backlot and Tour Center, which doubled as itself as Agents 86 and 22 chased their major adversary through the tour via a stolen Glamour Tour Tram full of tourists. The scenes proved hilarious as Max and Agent 22 raced through all of the favorite attractions, including the parting of the Red Sea.

The multi-million-dollar motion picture displays over 118 special effects such as flame throwers, a mid-air sky-diving sequence, exploding automobiles and an avalanche. Maxwell Smart even misses his target with a Deskmobile torpedo and obliterates a U.S. Postal mailbox.

The outstanding special effects were incorporated with at least 110 different stunt personnel under the supervision of stunt coordinator Richard Washington.

Cinematographer Harry Wolf, ASC, is a two-time Emmy Award-winner for his photography of the popular TV series BARETTA and COLUMBO. Wolf started as a camera assistant on GONE WITH THE WIND and Hitchcock's REBECCA, then worked as a camera technician for Technicolor on some of the industry's top motion pictures. He made his debut as a first cameraman with the HENNESSEY series. Since then, he has photographed dozens of series, television movies and mini-series, the latest of which are BRAVE NEW WORLD, LITTLE MO and LOOSE CHANGE.

In the interview for *AMERICAN CINEMATOGRAPHER* which follows, Mr. Wolf details some of the techniques and challenges involved in his photography of THE NUDE BOMB:

QUESTION: Can you give me a bit of background to your assignment as Director of Photography on THE NUDE BOMB?

WOLF: We somewhat facetiously called it "the poor man's JAMES BOND". It's similar to a James Bond movie, but also similar to the television series that Don Adams did, GET SMART. The heavy, played by Vittorio Gassman, invents a bomb that makes all clothing fabrics disappear. If he can pull this off, the world will have to come to him for the new material he has developed which can outlast anything. Don Adams, playing Maxwell Smart, is one of the agents the government has hired to track him down and do away with the bomb. There's a chase involved and a lot of new gimmicks—just like the Bond pictures.

QUESTION: Can you tell me about your method of working with the director, Clive Donner?

WOLF: We had the usual pre-production meetings and scouted locations, but unfortunately they had script problems on this picture right up to the first day of shooting. A lot of the sequences were not quite ready to be shot and we had to work on a catch-as-catch-can basis until we got the final script. After the second week, one of the lead actors became very ill, so we had to replace him and reshoot all of the material that he was in. This, plus the addition of 16 to 18 pages of dialogue, slowed us down a little. But considering all these drawbacks, we came in pretty much on schedule.

QUESTION: That would indicate that Donner had things pretty well lined out in spite of the script delays. Isn't that so?

WOLF: That's right. He had quite clearly in mind what he wanted; he would tell me and we'd do it. I've found that if you are working with a director who doesn't know what he's doing, and he comes in ill-prepared, he's at a loss and then you are lost. If he doesn't know what he's doing and you don't know what he's doing it's bad news. If you're both on the same wavelength, everything goes smoothly and it's a pleasure to work together. But if you get off the wavelength—utter chaos!

QUESTION: Can you tell me about any

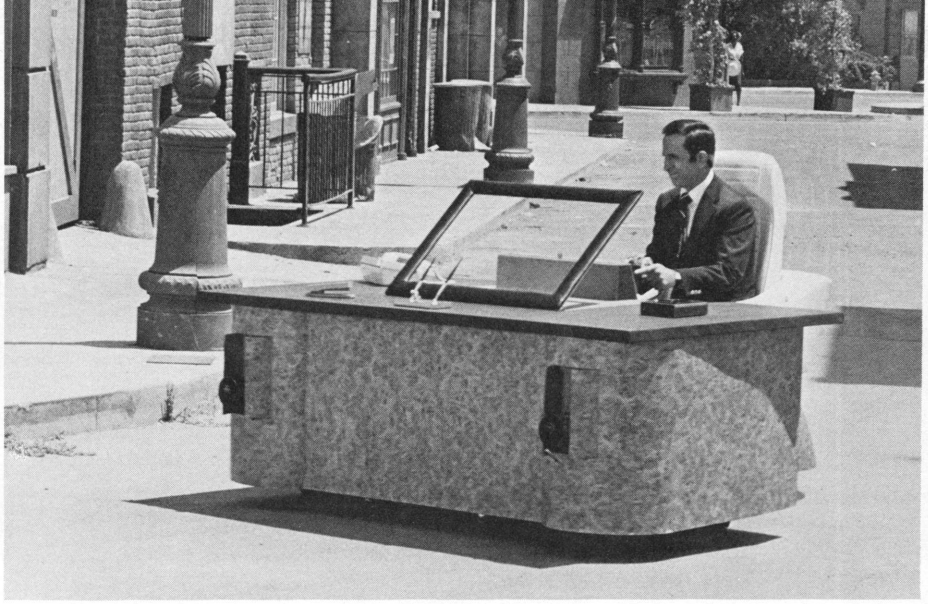
special photographic problems you had on this picture?

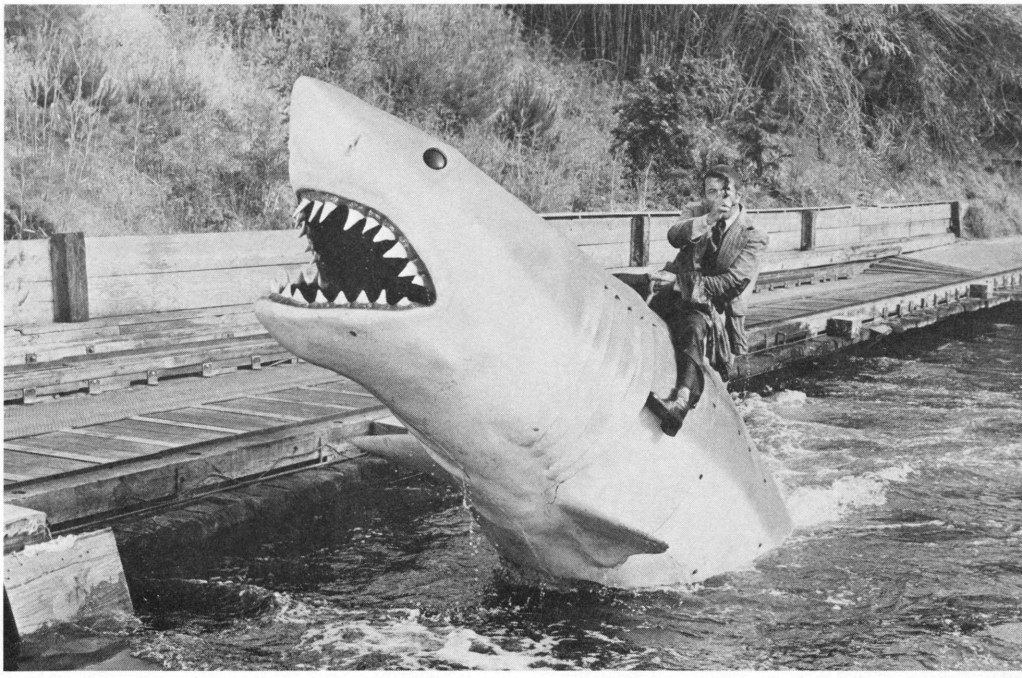
WOLF: I can't say that there were any really horrendous problems. It's very peculiar, but after you've been in the business for so long, the challenges are not as great as they were. Now and then something tricky comes up and you remember: "Oh, ten years ago I had this happen." So you do the same thing that you did then and it works like a charm. There's no more reaching. You know exactly where you're going and what you're going to do to get there. But I'd say that on THE NUDE BOMB the trickiest thing we had to do was the split-screen photography for the cloning sequence.

QUESTION: Can you elaborate on that?

WOLF: Vittorio Gassman, the mad scientist, has invented a cloning machine. While holding Adams prisoner, he tells him that when he explodes his bomb that leaves everyone nude, they'll all have to come to him for material and he will make their clothes. Adams says, "It's very tough to get help nowadays. How are you going to get that many seamstresses to make the clothes?" Gassman presses a button. The wall behind him goes up and a little woman comes out with a tape around her neck. He tells her to step into the machine. She does, and two of her come out. (We hired twin women for that scene.) He proved that by just running her through the machine multiple times, he could have all the help he wanted. Eventually there is a big fight in the laboratory between the scientist and Adams. The scientist runs through the cloning machine and two of him come out. Then Adams does the same thing. Finally there are about 48 people fighting in the room—24 of Adams and 24 of Gassman. This sequence presented difficulties because rubber masks had to be used on the actors, and the best rubber masks still are not good enough. I told the director, "I can't shoot these things; it's impossible. I mean, these masks are terrible, just awful." He asked me what I suggested. I said, "Well, when he walks into the room, can't he press a button and turn the lights down? Let's play everything dim from then on and, that way, you won't see too much." That's what we did and it worked out very well. Of course, in the close shots, which were done split screen, we have the real Adams and Gassman always in the foreground.

QUESTION: How many splits did you have on the screen at one time?





Reprising his highly successful TV role as Maxwell Smart, Agent 86, Don Adams gets to ride some strange things in THE NUDE BOMB, including the exotic Deskmobile, which drives like a car and fires cannons (ABOVE) and Bruce (BELOW), the mechanized shark from JAWS, which regularly terrorizes crowds taking the tour of the Universal City Studios lot.

WOLF: The most we had was four. They're fairly difficult to do and they call for certain technical ability. You have to tie the camera down and not move a thing within the frame. A rock-steady camera is essential to avoid "breathing" between the splits.

QUESTION: Were the splits made in the camera or in the optical printer?

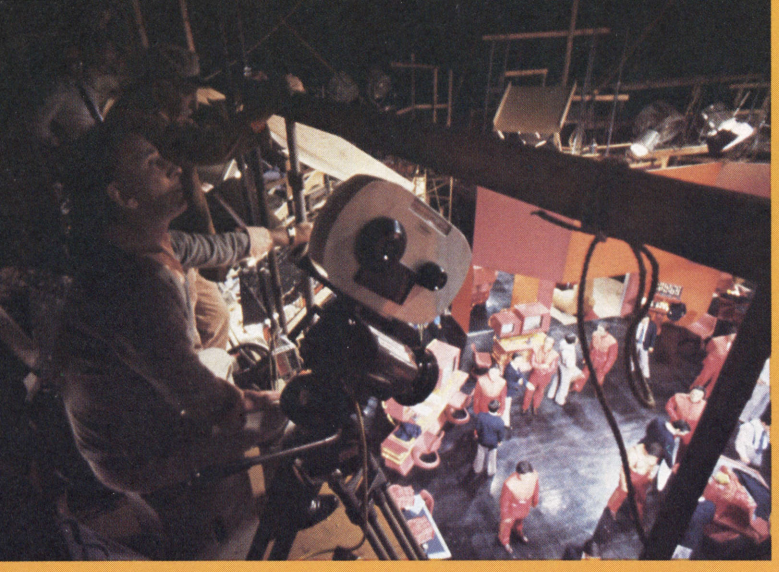
WOLF: In the old days, we used to do them in the camera. It was quite simple, but you had to have a straight line in the background to set your split on. But here we had nothing and the splits are very sharp, so they had to be done in the optical printer. If you get too far away (in order to get more than four people in the scene), you may as well use dummies. The farthest away we could actually get and still see who they were was a four-shot.

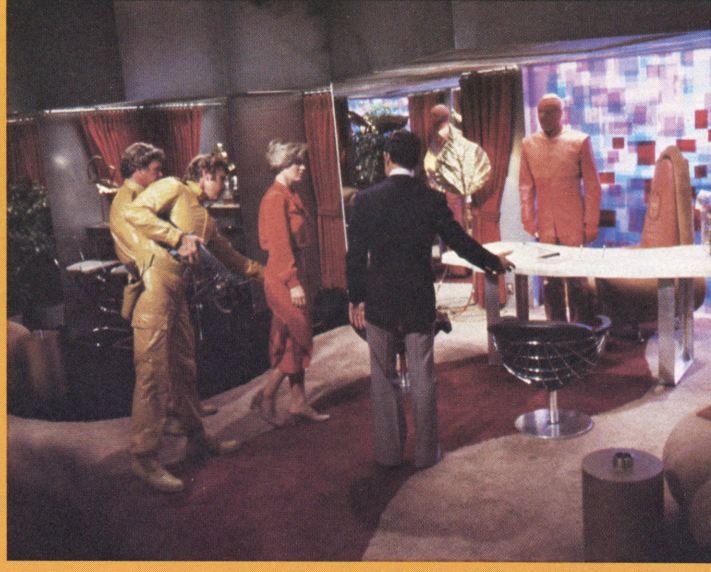
QUESTION: Did the lighting for your split-screen shots require any special consideration?

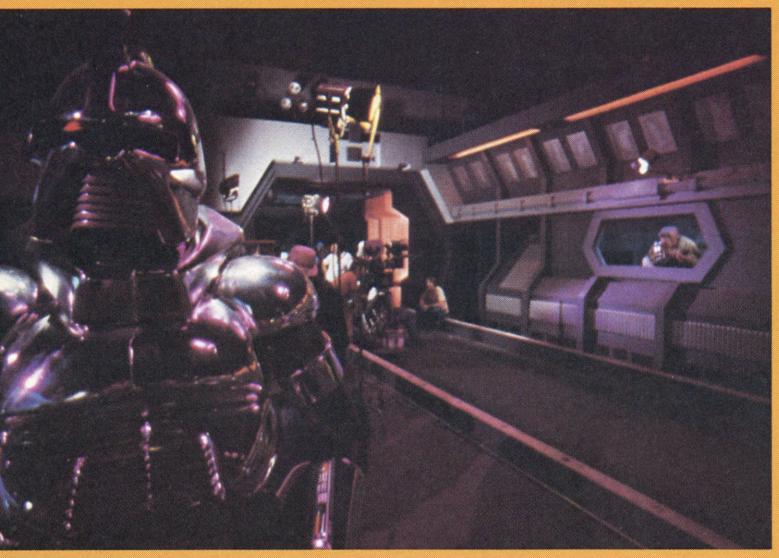
WOLF: No, the lighting was normal. I didn't do anything fancy.

QUESTION: Any special filtration used?

WOLF: Nothing out of the ordinary. I don't believe in using a lot of gimmicks. The lens manufacturer spends a great deal of money on his formulas in order to get just the lens he wants, and I'm sure that he doesn't want you then to put a Navaho rug in front of it. I'm of the old school in that I feel that everything should be







The 118 special effects (mostly physical) incorporated in the action of THE NUDE BOMB involve, in addition to the usual explosions and car crashes, a fight between 48 clones of a mad scientist and Maxwell Smart, a duel of metallic robots and a brawl between skydivers. (LEFT) Don Adams is seen hanging from wires in front of a blue screen during filming of a close shot for the skydiving sequence.

sharp. I go for depth and sharpness and detail.

QUESTION: What if you have a director who sees it differently?

WOLF: The first responsibility of the cinematographer is to give the director what he wants, but I've often found that what they say they want really isn't what they want when they see it on the screen. For example, a director will say, "Harry, I want this to be very dark, really black!" Well, if it's really black, how are you going to see anybody? This is quite ridiculous. In this medium you have to cheat a little bit, and I think that Hollywood cameramen are the greatest cheaters in the world, in this respect. It's part of our job. So I tell them. "Yes, I'll give you what you want; it'll be jet black." But I usually try to put in a little rim light or a little back light or a little fill light, just to soften it up a bit. It will still be dark, but you'll see something. I won't mention any names, but I've seen pictures on the screen recently where two people are in a room talking and you can't see them. If that's what you want, I should think you could put two figures in there, dub the sound and have the stars sitting in their dressing rooms.

QUESTION: From what you say, and judging from the still photos I've seen, there are a lot of elaborate sight gags in this picture.

WOLF: That's true. For example, in one

sequence they get off a plane and, as they walk down the ramp, the concrete opens up and they keep going straight down into the ground. They go underground and come up steps on the other side. They walk right into a cab and are whisked away. The cab is run into a large van and the sprinkler system is turned on. They're inside the cab getting briefed while the car is being washed. The taxicab paint disappears and it turns into a regular sedan. All of this took a lot of intricate setting up.

QUESTION: What about the famous "Deskmobile" I've heard about?

WOLF: That's quite a vehicle. You press a button and the blotter comes up to form a windshield. The underside of the desk, on the side where the person normally sits, flips up and it's a dashboard. The steering wheel comes up from underneath, pedals come out of the bottom, and the seat, of course, is attached to the desk. The motor starts up at the press of a button and the vehicle takes off just like an automobile. He presses another button, two little doors on the front of the desk open, and the headlights are revealed. Just below the headlights, on each side, are a machine gun and a cannon. He presses another button on the steering wheel and the machine guns go off—another button and the cannons go off. The Deskmobile chases a car all over downtown Los Angeles and over country roads. He keeps firing the cannon, but misses the car and blows up mailboxes and other automobiles and the sides of homes. He hits everything but the car he's chasing. It's a very funny sequence.

QUESTION: In view of all that action, there must have been a lot of camera movement. Isn't that so?

WOLF: Yes. This director is very good in moving the camera. He doesn't believe in a static camera—and I agree with him. I'd much rather move the camera than use a zoom lens. You can tell the difference on the screen. Donner believed in moving the camera and took every opportunity to move it. Consequently, we had a lot of dolly shots and they worked out very well. Donner is a cameraman's director, you might say.

QUESTION: Can you tell me a bit about your lighting problems—if any—on this picture?

WOLF: We had the usual lighting problems on this, just as everybody has. We had a few tricky light effects, but in a comedy there really isn't too much you can do with fancy effects beyond a certain point. You've got to see the people, because they are making jokes.

QUESTION: Does that mean high-key lighting a lot of the time?

Cinematographer Wolf, shown here with his camera crew, disdains flashing, pushing and other "gimmicks" for their own sake, in favor of depth, sharpness and detail.

WOLF: Not necessarily. High-key lighting, per se, as we all know, is considered to be comedy lighting, but in this particular picture (which is more or less of a whodunit, a spy story), the lighting had to create mood appropriate to that kind of subject matter. I've photographed a lot

Continued on Page 253

THE NUDE BOMB is highlighted by a chase through the Universal Studios backlot and Tour Center with all of its mechanical marvels and featured sights, such as the famous house from Alfred Hitchcock's PSYCHO (CENTER). (BELOW LEFT) A Glamour Tour Tram full of tourists, commandeered by Agent 86, careens through the Chinese Street on the backlot, where filming of another movie is in progress. (RIGHT) Don Adams checks with cinematographer Wolf to make sure his best side is being photographed.

THE AMERICAN SOCIETY OF CINEMATOGRAPHERS CELEBRATES ITS 60th ANNIVERSARY

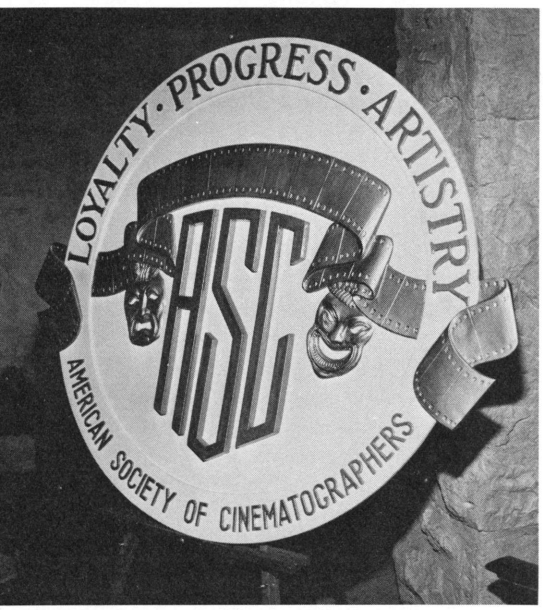
Filmland notables turn out at a sumptuous black-tie banquet to pay tribute to the A.S.C. in its 60th year as a professional society

By HERB A. LIGHTMAN

Members of the American Society of Cinematographers and their ladies celebrated the Society's 60th Anniversary on the evening of January 12th with a black-tie dinner-dance at the Bel Air Country Club. Arrangements were supervised by event chairman Stanley Cortez, ASC.

Jack Valenti, President of the Motion Picture and Television Producers Association, was the honored guest; master of ceremonies was noted motion picture and television writer Hal Kanter.

Other guests included actor Charlton Heston, Academy Award winner and past president of the Screen Actors Guild; Fay Kanin, President of the Academy of Motion Picture Arts and Sciences; Kevin Thomas, *Los Angeles Times* film critic; and Arthur Knight, author and University of Southern California professor of cinema.



After six decades of existence, the A.S.C. is the oldest continuing society in the motion picture industry dedicated to advancing the art and science of cinematography.

Music for dancing was provided by Manny Harmon and his orchestra.

The sumptuous affair was carried off in high style and with a minimum of speechmaking, but what was said went far beyond the conventional platitudes expressed at such an affair.

Stanley Cortez, pointing out that the evening was dedicated "to those who envisioned that which we enjoy tonight", introduced A.S.C. President William Fraker, who deferred to the honored guests.

Fay Kanin, president of the Academy of Motion Picture Arts and Sciences, and former president of the Writers Guild of America West, said: "I want to express my regret that the way movies are made, the writer and cinematographer are never really exposed to each other. I've always felt that the cinematographer's highest function is to bring the script alive, to bring those people alive—and I've missed very much having that relationship."

However, Mrs. Kanin went on to express her hope that she will be able to "establish a relationship with the cinematographer and get to know him better . . . and, who knows, one of these days I might even get to know *her* better."

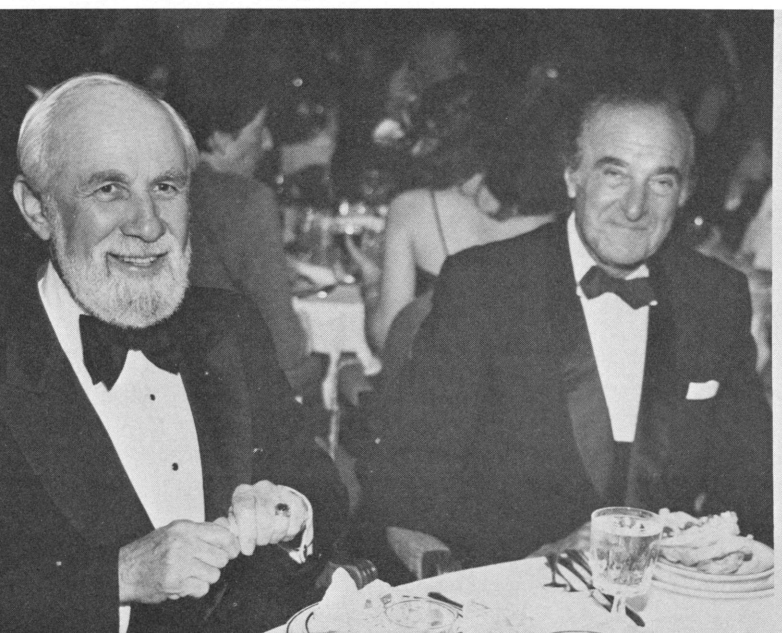
While no one was represented as the "star" of the evening, Charlton Heston, co-chairman of the American Film Institute and star of many an epic film, certainly scored as the most impressive speaker at the event with his graceful, unassuming and totally sincere comments.

Introduced by the irreverent Hal Kanter as "a great star who is a legend in his own book", the affable Heston said: "The actor and indeed the writer, the word, is subordinate to the image, the picture. We can all think of memorable films whose most significant moments have been images—Lew Ayres' hand at the end of ALL QUIET ON THE WESTERN FRONT. There's no way to act that. There's no way to write that."

Elaborating on those significant moments, he went on to say that they were achieved, not through acting or writing, but as a result of "what is suddenly discovered to be true looking through the finder." He described that "mystical quality" as the mark of every great cinematographer—one that "makes the cinematographer . . . better than his fellows. It is his desire to find this moment, which is only possible in film. It doesn't work this way on the stage or in any of the other arts."

Designating the "preeminence of the camera" as the element which makes all the difference between stage acting and screen acting, he said: "On the stage, no matter how much the director gives you, no matter what insights he offers you, finally the curtain goes up and he goes across the street and gets smashed in a

(LEFT) Obviously enjoying themselves at the gala party were A.S.C. President William Fraker and Stanley Cortez, ASC, Chairman of the event. Gifts were presented to the male guests by Consolidated Film Industries and to the ladies by DeLuxe Laboratories. (RIGHT) Music was furnished by Manny Harmon and his orchestra for those inclined to dance the night away.



bar, and you're there by yourself and it's your country. You live or die by what you can do.

"In a very real sense the stage is actors country, but that's not true in films. It's probably fair to say that film is the director's country—but the significant difference is the camera."

In a parting tribute to the assembled cinematographers, Mr. Heston said: "You made it possible for me to appear on the same screen with Gary Cooper—and that's a great achievement."

Guest of Honor Jack Valenti, president of the Motion Picture Association of America, also lauded the cinematographer as a consummate artist in the creation of motion pictures.

"Of all the skills and talents required," he observed, "the cinematographer is the only person on the set who is both painter and sculptor. More people will see his work in the theatre or on television than will have viewed the works of Matisse, Van Gogh, Fra Angelico or Henry Moore combined . . . I care desperately about people of your talent, craftsmen, men and women who, by careful weaving of light and color, are able to imprison on film . . . the whole spacious vision of the human condition."

Hal Kanter, to whom very little is sacred, kept the atmosphere buoyant by taking hilarious verbal pot shots at some of the most sacred cows of the film industry, but even he waxed serious for a moment when he said: "Yours is an awesome responsibility in the making of any film—a fact now recognized even by those monstrous egos who claim possessive (above the title) credit on their movies."

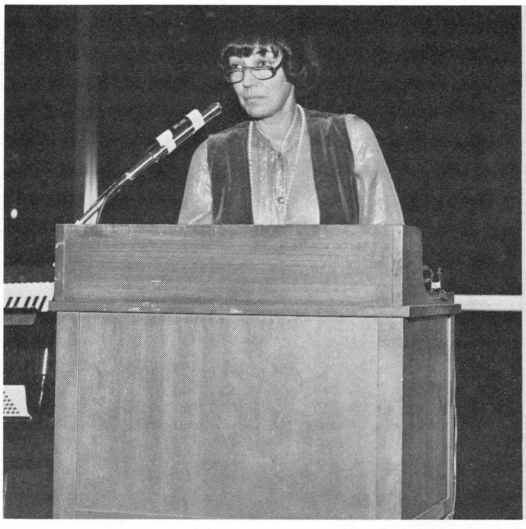
The American Society of Cinematographers, whose members are all motion picture Directors of Photography, is the oldest continuing society in the motion picture industry dedicated to advancing the art and science of cinematography.

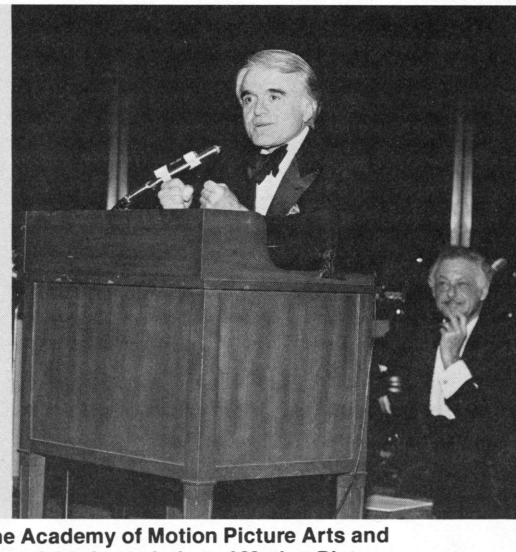
The Society began 60 years ago in Hollywood when the "Cinema Camera Club" of New York joined with the "Static Club" of Hollywood to form the present A.S.C. Its world-wide membership has been awarded 90 Academy Awards. Honorary members include Thomas A. Edison, George Eastman, Walt Disney and the Apollo XI astronauts.

William S. Hart and Mary Pickford were the first film producers to place the letters A.S.C. after the names of cinematographers Joe August and Charles Rosher, two A.S.C. founding members, on the screen credits of their pictures.

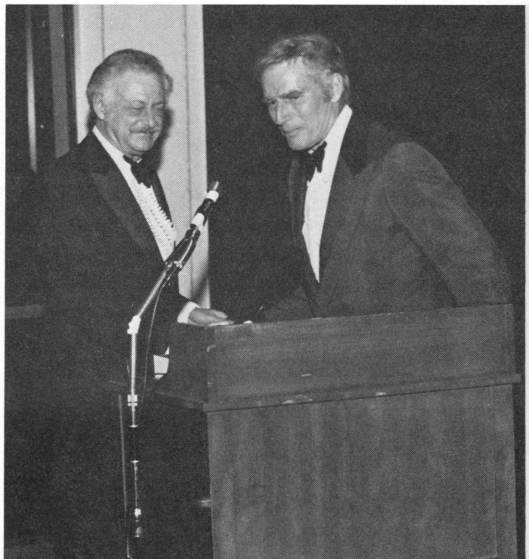
Membership in the American Society of Cinematographers is by invitation. Membership now numbers two hundred Directors of Photography and eighty Associate Members. ■

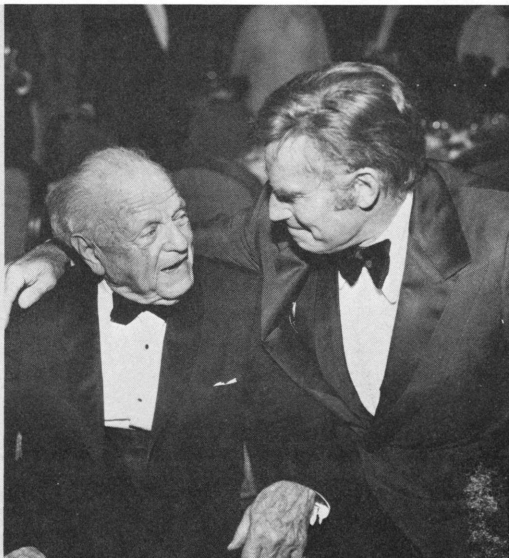
Several hundred guests filled the Main Ballroom of the Bel Air Country Club for the occasion. The black-tie affair combined a 60th Anniversary celebration with the Society's annual Ladies Night, which is traditionally held in the Hollywood clubhouse of the A.S.C. each January. A good deal of hard work and careful planning made the event a smashing success.





Honored guests included Fay Kanin, President of the Academy of Motion Picture Arts and Sciences (LEFT) and Jack Valenti (RIGHT), President of the Association of Motion Picture and Television Producers. (BELOW LEFT) Master of Ceremonies Hal Kanter introduces Charlton Heston. (RIGHT) Heston chats with an old friend, legendary four-time Academy Award-winning cinematographer Joseph Ruttenberg, ASC—90 years young, and born on the Fourth of July.





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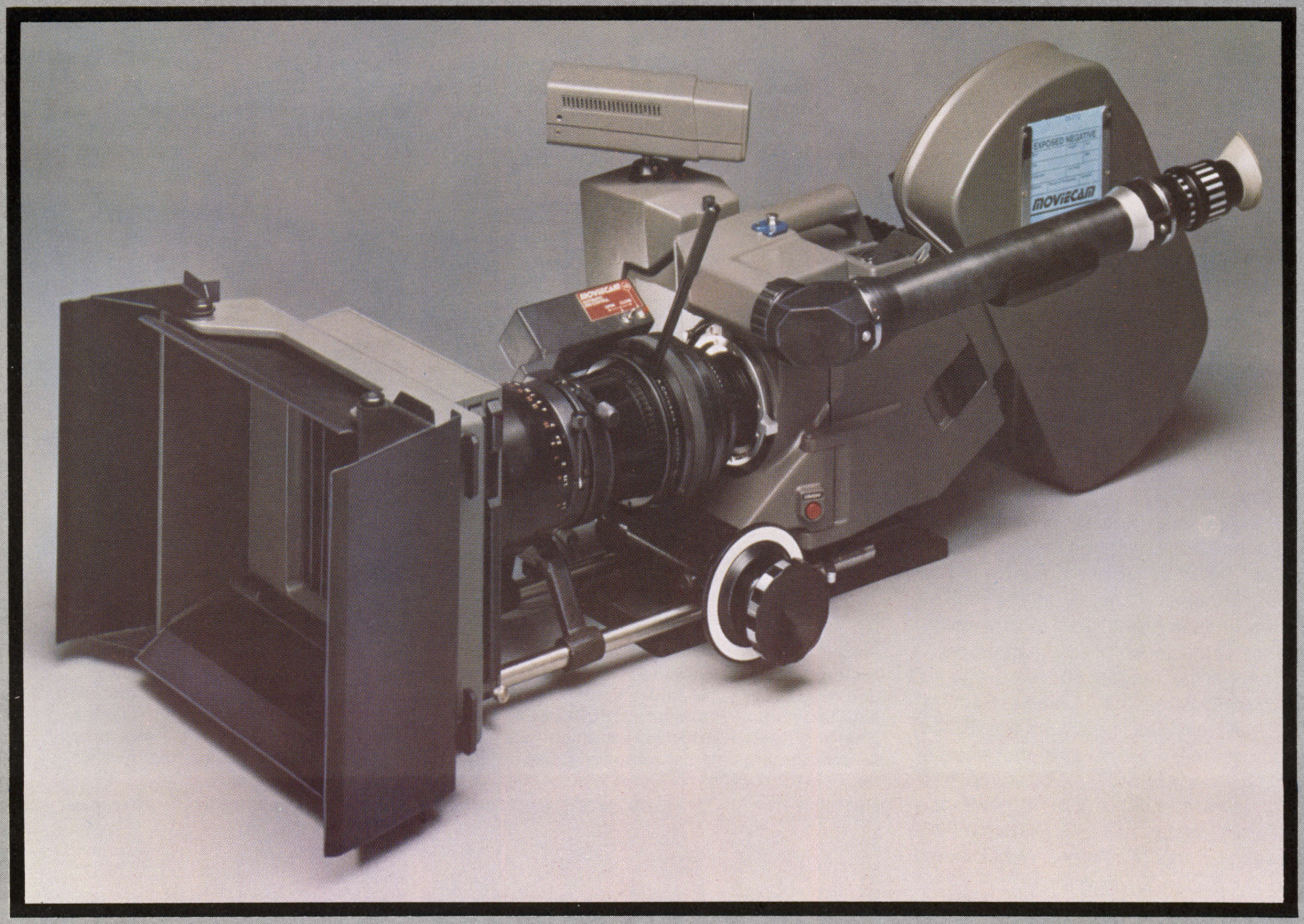

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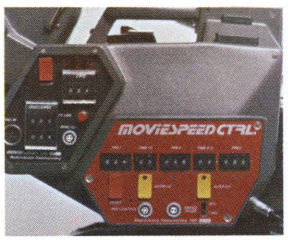

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HMI LIGHTS—THE PROS AND CONS

By MILTON FORMAN
A.S.C. Associate Member

A technical analysis which indicates that HMI lighting is a daylight source of extremely high electrical efficiency and that, despite certain shortcomings, it is here to stay as a film lighting system

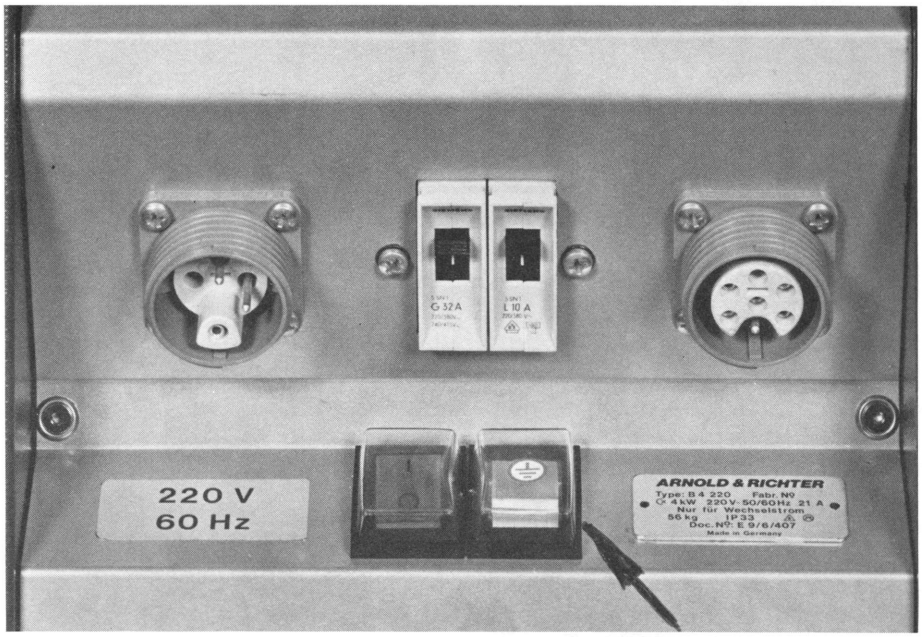
The past few years have seen the rather wide acceptance by the film and television industries of HMI lighting. As a result, these lights are now being manufactured all over the world: in the United States by Mole-Richardson of Hollywood, in Germany by Arnold & Richter and Kobold, in Italy by Ianiro of Rome, in France by LTM and Cremer of Paris and in Japan by Ryudensha of Tokyo.

The main reason for the rapid and wide acceptance of these HMI lights is that they provide a more efficient daylight source which is compatible with film and tape. Theoretically they produce from 80 to 102 lumens-per-watt of light, as opposed to 30 lumens-per-watt by tungsten. (See TABLE I.)

In addition, the size of the light source itself is relatively compact and permits efficient use in the optical system of fresnel luminaires. (See TABLE II). The lamps are also available in a good range of wattages: 200, 575, 1,200, 2,500, and 4,000 watts. The spectral range is also compatible with color film and video tape. (See FIGURE I).

Although it takes from one to three minutes to "warm-up" the lamp to full intensity when COLD, the lamps can be re-ignited instantly when they are hot. Therefore, they are fully useful in actual production.

Although the cost of the lamps is relatively high, their life is very substantial and relatively economical when all factors are considered. (See TABLE III). It is to be noted that the listed life of lamps is only valid provided that there is proper installation of the lamp in the luminaire and that the design permits proper electrical contact and proper heat sinking.



Control panel of ballast of the Arnold and Richter (Arriflex) HMI system. The lower right-hand pushbutton switch lights up when pushed to indicate proper grounding of the lighting circuit.

A typical LTM HMI light and ballast arrangement. The ignition system is part of a modular assembly inserted into bottom of the luminaire.

THEORETICAL EFFICIENCY VS ACTUAL EFFICIENCY

A word of caution must be stated here concerning TABLE I. The lumens-per-watt numbers shown represent the efficiency or lumens-per-watt achieved at the lamp itself. They do not account for the losses which are inherent in the total "system" required to power the lamps. The factors which must be considered in order to give an accurate picture of the efficiency of HMI must include the following:

1. A step-up transformer from 120 volts to 220 volts to provide the 220 volt input to the ballast. This can cause a loss of approximately 3-5%.
2. The ballast itself develops a power loss of approximately 13%.
3. The "flicker-free" Luxdyne ballast is estimated to develop an additional loss of approximately 8-12%.

Therefore, the actual lumens-per-watt efficiency must be modified for the standard type ballast by approximately 16 to 18 percent and, in the case of the Luxdyne ballast, by a number probably in excess of 25 percent. (See TABLE IV).

Despite all of these reductions from the "NOMINAL" efficiency of the HMI lamps, they still are at least twice as efficient as tungsten as a basic source. And more important, they are at least four times as efficient as tungsten when tungsten must be filtered from 3200 Kelvin to daylight.

The 4KW HMI luminaire and ballast manufactured by Mole-Richardson. A cart with wheels is available for the ballast.

FLICKER PROBLEM WITH HMI

Since HMI is a "pulsed" source of light, it is possible for the recorded image to develop "FLICKER" if each frame is not exposed to the same amount of light. This is no problem if there is synchronization between the framing rate and the "light pulses" from HMI. This is readily achieved with the use of power supplies and generators with stabilized frequencies and cameras with crystal-controlled motors. However, high-speed photography is impossible with the use of normal-type ballasts which are not "flicker-free".

CAN HMI REPLACE THE BRUTE?

Some enthusiasts of HMI lighting have made claims that a 4KW HMI light can equal the Brute arc in output. I believe it is necessary to put these misconceptions to rest. An examination of TABLE V shows that the output of the Baby Brute at 100 feet from the recorded target is greater than the intensity and coverage of the 4KW HMI light at 50 feet, or half the distance. The Baby Brute produces at 100 feet an intensity of 70 foot-candles and has a beam coverage of 12,500 square feet. The 4KW HMI lamp at 50 feet has an intensity of 65 foot-candles and a beam coverage of 6500 square feet. At 120 volts, the 4KW HMI lamp consumes approximately 40 amperes and the Brute consumes 225 amperes. There is no question that the HMI lamp is more efficient electrically. However, the requirements of filming many times require a SINGLE SOURCE OF LIGHT with very high intensity and coverage. In this respect, the artistic needs supersede energy efficiency. The Brute, therefore, is by no means obsolete.

The above analysis is based on the information provided by Mole-Richardson of Hollywood, with respect to the 225-ampere Baby Brute Molarc with the 14-inch fresnel lens, and the 4KW HMI light with the same optical system and the same 14-inch lens.

WEIGHT ANALYSIS

It is interesting to make a weight comparison, since there is an illusion that the Brute is so much heavier than HMI equipment. This is true when the light head of the Brute is compared to the HMI luminaire. For example, the 4KW HMI light head weighs approximately 60 lbs. The Baby Brute weighs 126 lbs. However, when the HMI ballast and head are combined and compared to the grid and head of the Baby Brute, the total weight of the Baby Brute is slightly less (See TABLE VI). Of course, the Brute is flicker-free. If we compare its total weight with the total weight of the 4KW "Flicker-Free" ballast alone, produced by Luxdyne, then we

SPECTRAL DISTRIBUTION (HMI)

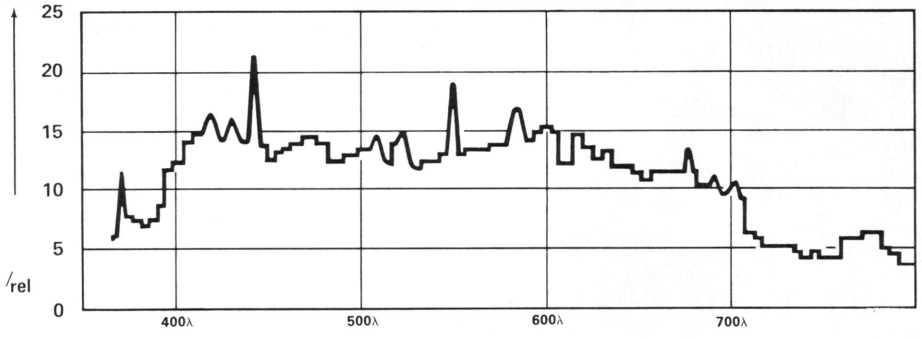


FIGURE 1

FIGURE 2

DISTRIBUTION SYSTEM FOR HMI

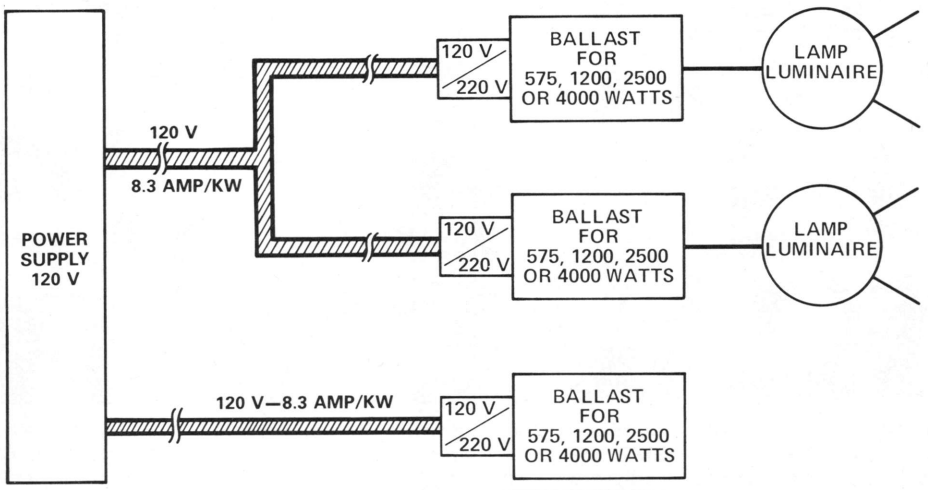
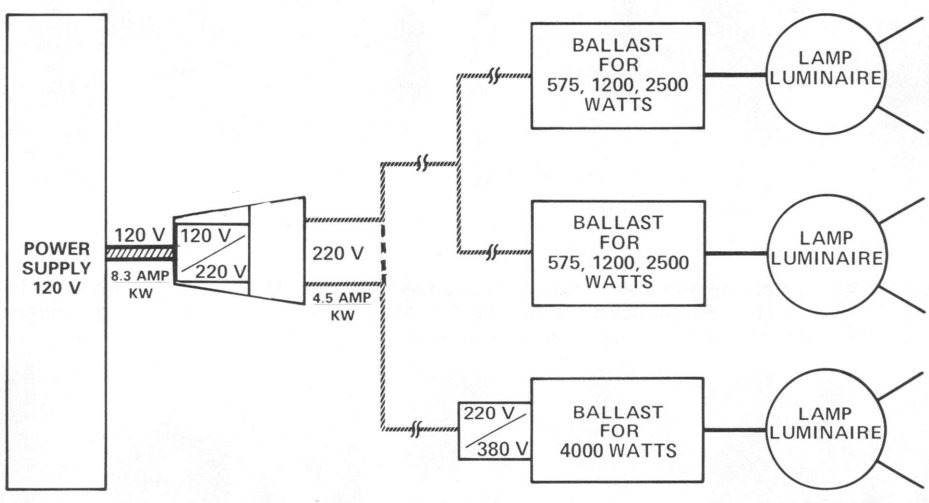
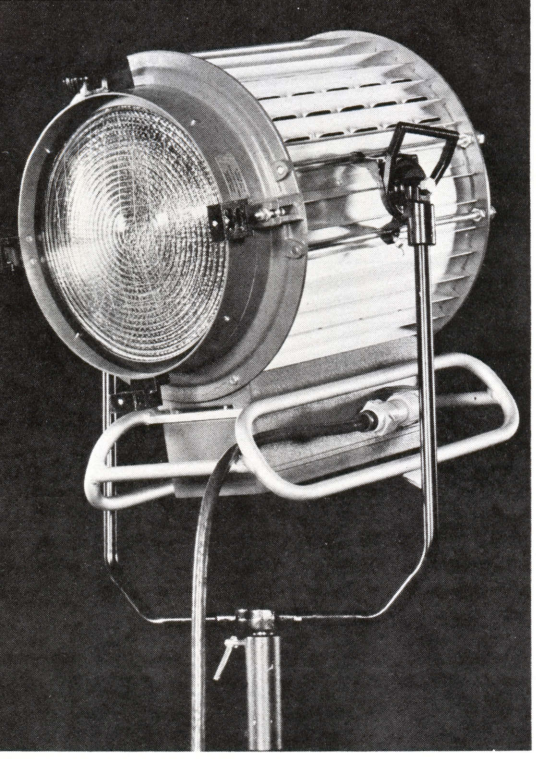


FIGURE 3—Diagram illustrating the increased efficiency available through the use of the Arriflex distribution system. Voltage is stepped up near the power supply. Then power at lower ampere consumption is transmitted to the ballast, which is the farthest distance from the power supply.

DISTRIBUTION SYSTEM FOR ARRIFLEX HMI





can see that this ballast alone is heavier than the Brute and the grid together.

We must keep in mind that the weight of the Brute head itself is a great liability, since it is the unit which must be dragged around and raised on stands. Also, the carbon dust from the arc is undesirable. I am pointing this out because we have a tendency sometimes of oversimplifying. I want to caution that as long as its wattage is limited to 4KW, it cannot replace the arc.

WEIGHT OF VARIOUS BALLASTS

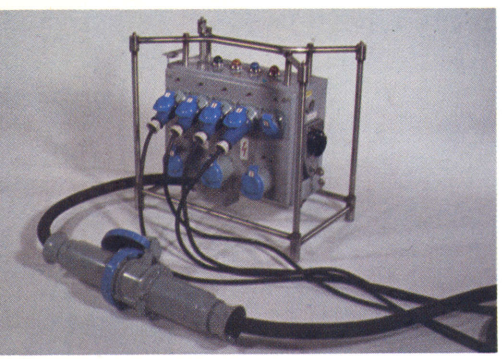
Since the ballast, from a practical point of view, must be placed near the HMI light, and therefore, must be moved with it, it is important that we have information about its weight. So, for the purpose of supplying such information, I refer you to TABLE VII.

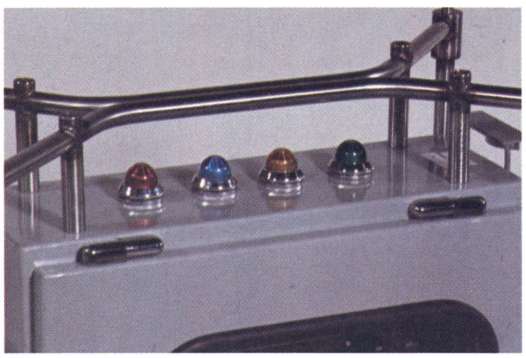
Because of the weight problem of the ballast, it has been suggested that the ballast be kept near the power source (generator, etc.). Unfortunately, this is not a practical suggestion, since the connection of the ballast to the HMI light head requires a seven (7) conductor cable which is extremely expensive and heavy.

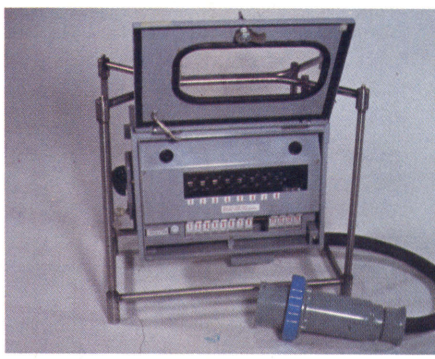
SOLVING THE "FLICKER" PROBLEM

Although it is possible to produce flicker-free film and tape with adequate security (See article by David Samuelson in the November, 1977 *AMERICAN CINEMATOGRAPHER*), there is no question that it is desirable to have available a true "flicker-free" ballast. At the moment, because of problems of much higher costs and greatly increased weight, it is the opinion of this writer, that since the vast majority of filming is done at normal film speeds (24/25 FPS), there is no need to pay the penalty for the mass of the shooting. When high-speed

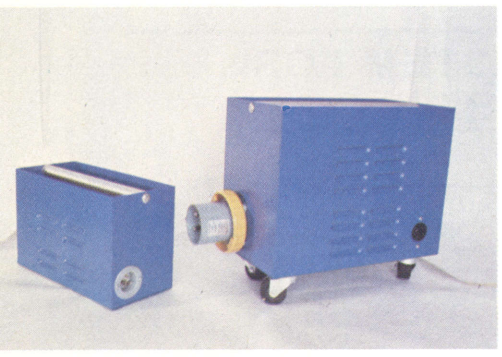
(ABOVE LEFT) A typical HMI luminaire manufactured by Arnold and Richter. The ignitor circuit is housed in a separate waterproof casing which is mounted under the light head itself. The tubular assembly protects the ignitor casing. Center of gravity of the complete light can be adjusted when accessories are added to the light.

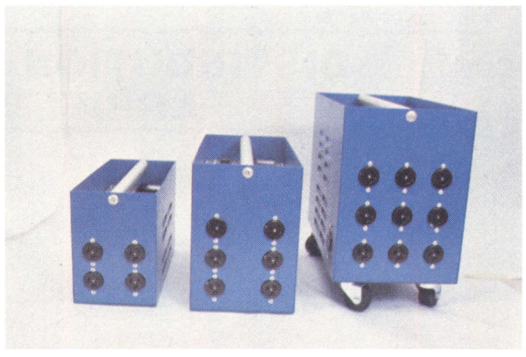




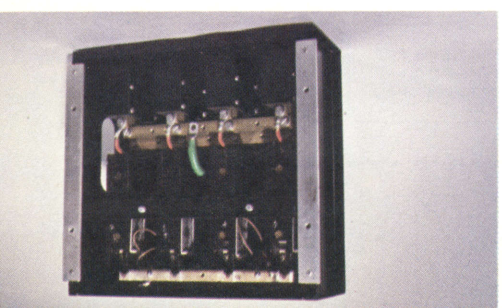


(LEFT) Samuelson's HMI grounding-test system and distribution system. (CENTER) The tell-tale light system for testing safety grounding of each lighting circuit. (RIGHT) Individual on-off circuit breakers for each lighting circuit. (BELOW LEFT) Arriflex "Distribution Centers". 15, 30, 50 and 100-ampere, 3-wire-grounded units are available. (CENTER) Lamp outlets for distribution. (RIGHT) Ampere meter and circuit breaker for overload protection built into each "center".





(LEFT) Supplementary grounding and distribution systems for HMI lighting developed by Lee Electric. (CENTER) Another view of the Lee Electric unit. (RIGHT) Frequency meter provided by Arnold and Richter for checking frequency of power supply in the interest of avoiding a possible flicker problem. LTM also markets a similar device.



photography is required, then either flicker-free ballasts, arc lights or tungsten should be employed.

ELECTRONIC FLICKER-FREE BALLASTS

The first attempt to solve the "flicker" problem was to design an electronic circuit that produces a "square wave". The pulse required for HMI must be from ALTERNATING CURRENT (A.C.). This produces an "ON-OFF" pulse of light. The modification of A.C. to "square wave" produces substantially a minimal "OFF" period, so that the lamp, for all practical purposes, looks at "continuous" current. Berkey Colortran at one time produced a ballast of this type for the 575-watt HMI lamp, but they never could produce a unit for higher wattages. To the writer's knowledge, they have discontinued the production of HMI power supplies. Ryudensha of Japan advises that they have an electronic ballast which is "flicker-free"; the present sizes are 575 and 1200 watts. They claim they will have all sizes in the future. Cremer and C.S.E.E. of France, at the last SMPTE Conference in Los Angeles, demonstrated electronic "square-wave" ballasts up to 2500 watts. They claimed a certain amount of dimming capability with weight reduction of approximately 60 percent. Although they are not yet in a position to deliver production units, they advise that the cost will be approximately double the present ballast cost. There is no question but that if these ballasts can be reliably produced for all wattages through 4KW, they should be considered for use when high-speed shooting is required. If the lights must be transported by plane, the economics should be analyzed per additional savings.

LO-MOD FLICKER-FREE BALLASTS

The Luxdyne Corporation of Los Angeles, California is producing an "electromagnetic" "non-electronic" type ballast which "approximates" a "square-wave". It claims that it can produce film with no "flicker" when the framing speeds vary from 16 to 36 frames per second, and when the frequency or alternating current varies from 58 to 62 cycles. The weight and cost of these units is considerably higher than normal ballasts. (See TABLE VII for weight analysis). It is observed that the "flicker-free" ballasts of both types give the cinematographer additional flexibility when shooting at normal speeds. He can vary his shutter angle as desired. The question is: "Is this economically feasible for the mass of normal shooting?"

There is no question but that if a "flicker-free" ballast can be produced which is low in weight and is low in cost, it

Continued on Page 256

EFFICIENCY TUNGSTEN VS. HMI

SOURCE	COLOR TEMP. (K)	(Lumens/watt)
Tungsten	3250	30
Tungsten	3250 filtered to 5500	15 - 20
HMI - 200 W	5600	80
HMI - 575 W	5600	85
HMI - 1200 W	5600	92
HMI - 2500 W	5600	96
HMI - 4000 W	5600	102

TABLE I

TABLE II

HMI IS A COMPACT SOURCE

WATTAGE	ARC LENGTH (MM)	ARC LENGTH (IN.)
200	10.0	0.4
575	11.0	0.43
2500	20.0	0.79
1200	13.0	0.51
4000	34.0	1.34

TABLE III

HMI LAMPS (Life)

WATTS	LIFE (HRS)
200	300
575	750
1200	750
2500	500
4000	500

AN AMERICAN FILM INSTITUTE SEMINAR WITH ROBERT WISE AND MILTON KRASNER, ASC

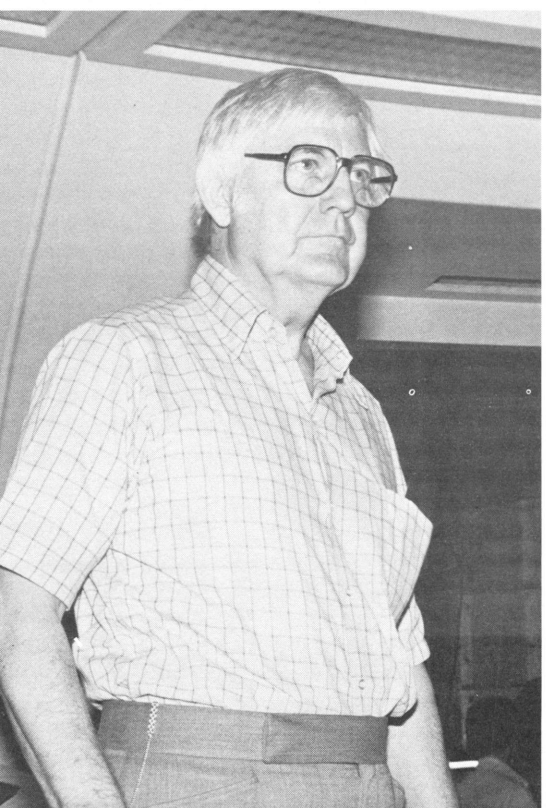
Two of Hollywood's most honored artists share their wealth of technical expertise with student filmmakers of the A.F.I.

As perhaps the most important aspect of education for the Fellows in training as film-makers, historians and critics at its Center for Advanced Film Studies, located in Beverly Hills, California, the American Film Institute sponsors conferences and seminars with top technicians and talent of the Hollywood film industry. These men and women, outstanding professionals in their respective arts and crafts of the Cinema, donate generously of their time and expertise in order to pass on to the potential cinema professionals of tomorrow the benefits of their vast and valuable experience.

In keeping with this tradition, Cameraman's Local 659 (IATSE) sponsors a continuing series of seminars with ace cinematographers. These men—both contemporary working Directors of Photography and some of the now-retired "greats" of the past—meet informally with the Fellows at *Greystone,* the magnificent estate which is the headquarters of the A.F.I. (West), to present valuable information on cinematographic techniques and answer questions posed to them. Very efficiently introducing and moderating each of the individual seminars is "Emmy" Award-winning Director of Photography Howard Schwartz, ASC.

The dialogue which follows was excerpted from a recent A.F.I. seminar featuring both producer/director Robert Wise (then in the final post-production phases of STAR TREK) and veteran cinematographer Milton Krasner, ASC.

Highly respected throughout the world film community, Robert Wise is the recipient of four Academy Awards (two each for WEST SIDE STORY and SOUND OF MUSIC).



The seminar took place immediately following a screening of the classic prize fighting feature, THE SET-UP, directed by Wise and with Krasner serving as Director of Photography.

HOWARD SCHWARTZ: I'd like you all to meet Milt Krasner and Bobby Wise. That was a 16mm print you saw* but the photography, the story, everything is super. I was the assistant on that. I remember the shot when we went through the window in the opening. They just had the new Academy crane then. We didn't have remote focus controls then, I had to walk on apple boxes through the window. They didn't have zoom lenses then, either, and that terrific shot of her at the end running out of her apartment and down to Bob Ryan when he was down on the ground, that was done on a crane. It was a terrific job of timing, running into those close-ups. Eddie Pyle was the operator on that and the RKO camera, which at that time was considered a good one, had a finder that now you'd laugh at. It had parallax adjustments on it but it wasn't that good. He did a tremendous job on a shot like that. By today's standards, when you use a zoom lens and a reflex camera, when you go into inserts and things like that, you can really lay it on, but when you realize the antiquated equipment, it's a super job of operating. The show was filmed with Plus-X and the only scenes that we really did off the lot was one sequence with Audrey Totter at the old Pacific Electrical tunnel on Temple Street. The Ocean Park Arena was where the sequence of Bob Ryan running around the ring was shot—the interior of the arena itself. We had the ring built at the studio and Milt used smoke in there. They had a certain number of rows and blinking lights in the back where you ran out of people. The rest of it was shot at what used to be called RKO Pathé, 40 acres out on a back lot in Culver City, which is now an industrial complex. There was a big shot coming by the clock at the opening and closing, a big crane shot. So Milt or Bob, is there anything you want to say before we open it up for questions?

ROBERT WISE: I don't know how many people know that the base material for THE SET-UP is a poem. I find that to be most interesting and unusual. It was a long narrative poem by Joseph Moncure March. He wrote two outstanding things in the late '20s, one was "The Set-up," which was a poem that tells very much our story except that it was a black fighter in the poem. He wrote another one called "The Wild Party," which was an extraordinary work about a party in Greenwich Village during Prohibition. That was made into a film not very successfully several years ago by some people who transferred the whole setting out to Hollywood.

HOWARD SCHWARTZ: Another thing, it was my introduction to story boards. I remember the first stuff we did in the fighter's locker room is where I saw the story boards for the first time. Milt would be laying out the shots according to the story board which was done by a guy named Maurice Zuberano. He's had a long association with Bob, hasn't he?

ROBERT WISE: That was the first time I had story boards and the first time I'd worked with Zuby. We've worked on many pictures since, not every one of mine, but he just finished working with me on STAR TREK and he did WEST SIDE STORY with me and SOUND OF MUSIC and quite a number of others. But I remember we did a lot of work on the story boards, it takes a long time to do them properly. He had the whole script boarded except for the fight. He didn't do anything for the fights because we were just going to have to get what we could on that. I think we used about 90 percent of the story boards in our shooting. I don't think I've ever had a film that stayed as closely to the story boards.

HOWARD SCHWARTZ: That's where some of those great compositions came from, and the framing of the foreground people, the actors and it was really interesting. How do you go about starting that? Do you have to give him the whole idea of the moods you want? Because he even gets mood into the story board.

ROBERT WISE: We'd usually have a session in the office talking out a given

sequence, maybe walking our way through it and trying different moves and action and he would go away and do a rough sketch of it and then come back. I might see something I liked and he might have a suggestion about how it could be improved and we'd go back and forth on a sequence maybe two or three times and then finalize it. It was a matter of talking it out in the office to start with. We didn't have the sets up or anything, we only had the sketches of the sets.

QUESTION: You wouldn't have art directors at this point, would you?

ROBERT WISE: We didn't have actors at this time. I'm talking about two or three months before we started the shooting.

HOWARD SCHWARTZ: Did you use any extra people or stand-ins to work around?

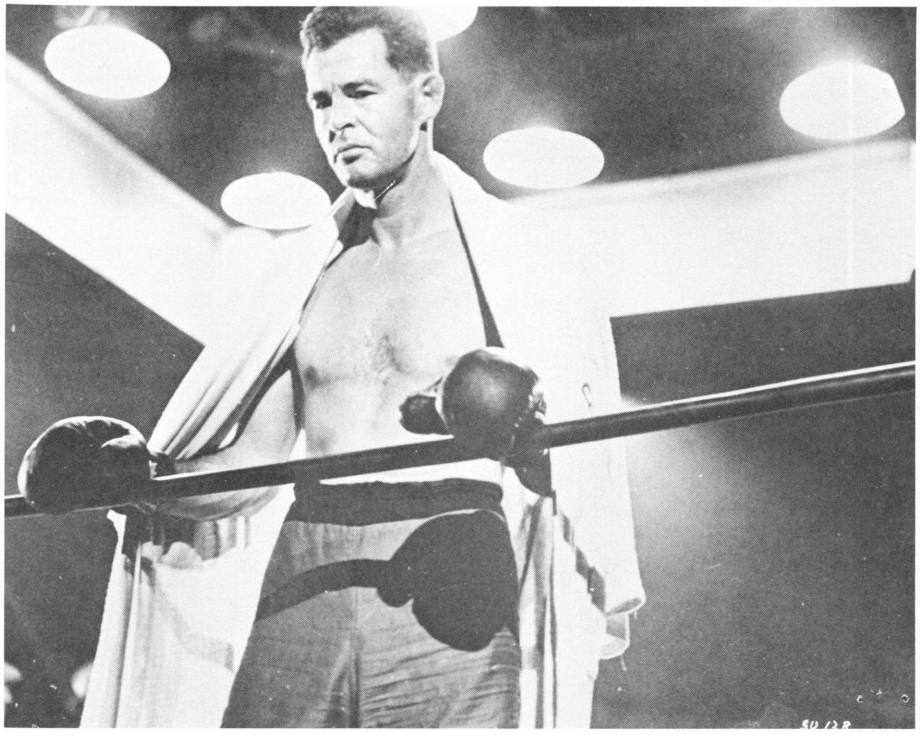
ROBERT WISE: No, Zuby and I just did it ourselves.

QUESTION: When you story boarded, and then brought in your actors, as compared to when you didn't story board before, did you find any difference in performances? Is it any easier?

ROBERT WISE: Yes, it's always easier and better to have a place to start from, whether you stick with it or not. Very often you plan something in the office and when it gets on its feet with the actors on the set and gets started, sometimes it just doesn't want to play that way. The actors will find things, new dimensions that you can't anticipate. It's only through the doing, the playing of the scene that that happens. Then you have to be able to work what the actors develop into what you planned or say, "Listen, that isn't going to work. Let's try and make our move this way, or change the set up and go another way." So you have to be flexible, but story boarding, and having a start, gives you a good handle on how you approach the film or what the feeling is going to be and what the continuity and the look is going to be, whether you change that within it or not.

QUESTION: When you're on the set shooting, and your crew is there, making X-amount per hour and that sort of thing, and you're changing, do you sacrifice anything in the kind of work that's being done?

ROBERT WISE: Not particularly, but if you are prepared, and it's good preparation, it gives the cameraman so much more to work with and then it gives me more time to work with the actors and concentrate on what is going up on the screen.



Starring the late Robert Ryan as an ill-fated prizefighter, THE SET-UP was produced by RKO-Pathe Studios with Robert Wise directing and Milton Krasner, ASC, as Director of Photography. Although it was not Wise's first directorial assignment (CURSE OF THE CAT PEOPLE was), it propelled him into the ranks of serious and talented directors. The film, produced in 1949, has since become a classic of its *genre*.

HOWARD SCHWARTZ: Another thing it seems to do is allow you to keep your story more directly in line with what you started out with. You go more for direct coverage along that story line instead of having superfluous coverage. It saves a lot of time in shooting.

ROBERT WISE: I don't think I've ever been on a film where I've had more planning time, contact, discussions and tests than I had on THE SET-UP because we were determined to get the real nitty gritty reality feeling of this story and setting as much as we could. You can do that a hell of a lot better in black and white than you can in color. Milt and I consulted and tried different lenses and films–

Continued on Page 269

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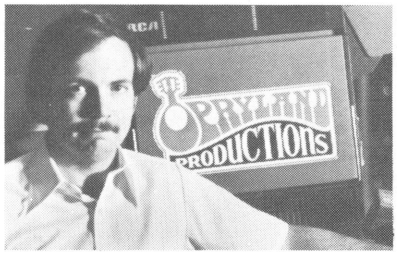

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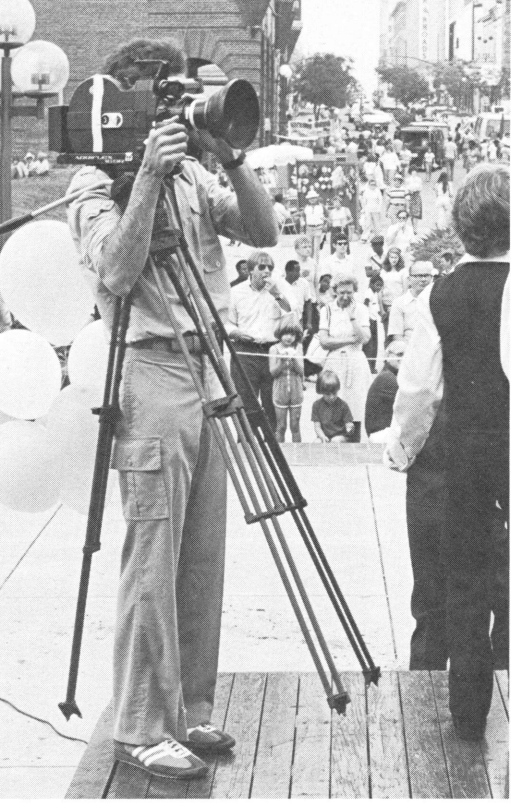
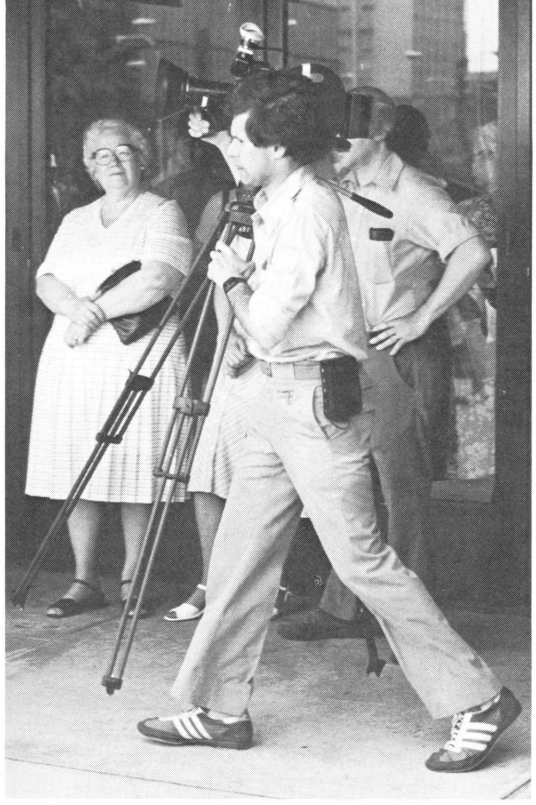



Shooting a documentary: quick moves. Camera rests comfortably on Mr. Fauer's shoulder as he hand-holds with tripod attached.

Hand-holding with the tripod on the camera! Jon Fauer talks about working with a Sachtler:

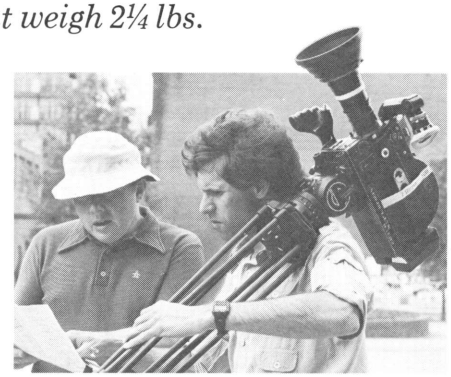
The effect on documentary style of a 6¾ lb. fluid head and carbon-fiber 58 inch legs that weigh 2¼ lbs.

"When the action isn't going to repeat and it's happening fast, you often have to go hand-held," says documentary cameraman Jon Fauer.

"But you give up a lot, of course. No steady long-lens closeups. No throwing the background out. Even staying wide, the image isn't really rock steady on a big screen. All these things you sacrifice for speed."

"I bought the Sachtler because of its incredible light weight with the carbon-fiber legs. After I began using it, I found I could make quick moves to a new angle carrying tripod and camera together. The Sachtler was the first tripod that didn't slow me down."

"The quick-release plate lets me go hand-held fast—and with the ARRI SR on my shoulder, the plate doesn't dig into me. I find I can put the camera back *onto* the Sachtler faster than I could with any other tripod."



"We spend half the time carrying the equipment around," says Jon Fauer. "Weight is important."

"Using my SR on other fluid heads, I was always fighting the counterbalance spring. Too much or too little. The Sachtler's adjustable spring gives me perfect neutral balance—with my 400mm *and* my Zeiss Superspeeds."

"The SR's tripod socket is fairly far forward on the base, and the Sachtler's quick-release plate is small. That's why it doesn't dig into my shoulder," says Mr. Fauer.

"The head is small, too. And this led to something I wouldn't have believed. In the heat of the moment, I found myself needing a hand-held shot *fast*. So I began hand-holding—*with the tripod still attached*! I forgot it was on there."

Who took the photos on this page—and why is that significant?

On this job, there was a two-man crew: Jon Fauer, cameraman, and his assistant, Jeff Laszlo. Usually, the assistant has his hands full carrying the tripod around two steps behind the cameraman. As you can see, Mr. Fauer carried camera and tripod himself. The pictures were taken by Mr. Laszlo.

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Where to see Sachtler equipment on display now:

Listed alphabetically below are some ARRI dealers in whose showrooms you can now inspect Sachtler tripods.

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(415) 495-3852

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Atlanta Film Equip. Rentals
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Atlanta, Georgia 30329
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Birns & Sawyer Inc.
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Brenner Cine Sound
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(202) 244-3800

Camera Mart Inc.
456 W. 55th Street
New York, New York 10019
(212) 757-6977

FERCO
707 11th Avenue
New York, New York 10019
(212) 245-4800

FERCO
750 Bryant Street
San Francisco, Calif. 94107
(415) 957-1787

Glazer's Camera Supply
1923 3rd Avenue
Seattle, Washington 98101
(206) 624-1100

Jack Pill & Associates
6370 Santa Monica Blvd.
Hollywood, Calif. 90038
(213) 466-3471

Otto Nemenz Internat. Inc.
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Roessel Cine Photo
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(312) 321-9406

Victor Duncan Inc.
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Victor Duncan Inc.
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"THE NUDE BOMB"
Continued from Page 239

of comedies and, in many cases you're just expected to throw light in and that's it—although I've seen a lot of dramatic pictures on the screen recently in which that's being done too. They just pour in a lot of so-called soft light. There was one occasion in this picture when I was forced to use soft light because there was no other way to get the shot. We had a shot inside a parachute plane, with all of the parachutists lined up in seats against the wall, and there was no way of getting any light in there. I had to use bounce light—which I very seldom ever do, unless I'm forced to—but in this case it was the only way to go.

QUESTION: What about the use of colored light in this picture?

WOLF: The producer wanted color, so we put red, orange and yellow gels in the color wheels to create the effect of changing lights. We used a lot of this in the fight sequence. The picture opens in the television department of a store, with a lot of television sets of all sizes and Vittorio Gassman's image on each one of them. Not too long ago, if you had a situation like this, the images would have had to be burned in separately by means of an optical printer, but now it's all done electronically by a man who is a video specialist. You don't get any roll bars. It's just as clean as a whistle. We had 15 or 18 television sets in this department store and Gassman was on each one of them, warning the world that he had this bomb and that if his demands were not met, he would explode the bomb and leave everybody nude.

QUESTION: Did you do any flashing on this picture?

WOLF: I don't believe in flashing just for the sake of flashing, but it is an instrument which, when used judiciously, can be valuable to the cameraman. There was one occasion in this picture when, for technical reasons, I had to use it. There was a van that was going to be blown up and it was all in shadow, with just a bit of back light. The foreground, however, was in bright sunlight and there was no way to change that. The only thing I could do was bring the shadows up so that there wouldn't be so much of a contrast and, for this reason, I had the lab post-flash the scene. It came out very well.

QUESTION: What about forced development?

WOLF: I had to push one scene, but only because there was an error in exposure—I won't say whose. The stop was told to me after the scene was shot and I said that it was wrong. Someone had made a mistake, so I had the lab push the scene one stop to correct the mistake. But ordinarily (unless I have to for some technical reason), I don't believe in pushing. I don't believe in it because it usually isn't necessary. Today the cinematographer has a tremendous amount of new and advanced equipment—lenses, lights, generators—everything he wants, and there is no reason why he has to shoot wide open and push the film. A cameraman is an artist and there is no reason why he can't paint with light. If you have all these things at your disposal, there is no reason why you have to get fancy with pushing and flashing. I don't believe in shooting at eight footcandles and pushing three or four stops. What's the reason for this, if you have the means at hand in terms of lights and generators? I don't know why anyone would want to do it, unless they're trying to get a special washed-out look or a contrasty look or a lot of grain. When you push a film you are bound to get grain.

QUESTION: Does that mean that film should simply be shot according to the manufacturer's recommendations?

WOLF: I certainly feel that way. Before they come out with a new stock they spend millions of dollars on research. They put out a prospectus for the cameramen, telling them that, according to their research findings, the emulsion works best when exposed at so many footcandles at such-and-such a stop. But when the film comes on the market, a very large percentage of the cameramen disregard everything Eastman has recommended and they push it, pull it and do everything to the stock that they aren't supposed to do. I'm sure Eastman isn't in favor of this practice, after all the effort they've put into research. I've found that if you go along with Eastman and follow their line of reasoning, based on research, you can't go wrong. It is especially impossible to go wrong with the new 5247 color negative. It's the most fantastic emulsion I've ever worked with. It has a tremendous amount of latitude and it's quite difficult to underexpose or overexpose this emulsion, unless you deliberately do so. I believe it's saved many a cameraman.

QUESTION: You indicated an aversion toward shooting wide open. Does that mean that you have a particular stop
Continued on Page 280

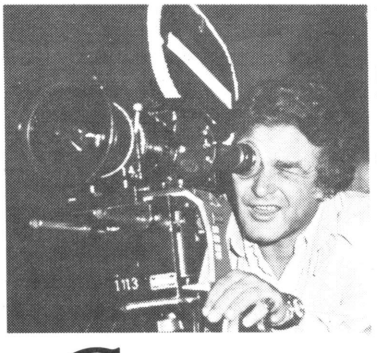
"When they asked me if we could do it, I said yes... and called TVC."

Pete Miranda
Mayday Productions, Inc.

Pete Miranda talks about a series of General Electric Corporate commercials his Mayday Productions is currently filming.

"When George Bragg of B.B.D.O. told me that a night sequence for G.E.'s Lucalox street lamps had to be filmed *using only the light from those lamps,* I was sure TVC's Chem-Tone II could do it for us.

"Fortunately my cinematographer, Pete Passas, and I have a lot of experience shooting for this process. A combination of fast lenses and a special Chem-Tone run, presided over by Dan Sandberg, and Bernie Newson, produced dailies that were hard to believe in their clarity, resolution and superb visual qualities.



"I can't think of a harder test for film. The lights themselves give off a golden glow. General Electric was very sensitive to the fact that this glow be transmitted onto the film without color shift.

"With Chem-Tone, the skin tones are perfect, clearly reflecting the coloration of the light source.

"We literally got on film what we could see with the naked eye."

Pete Miranda
Mayday Productions, Inc.

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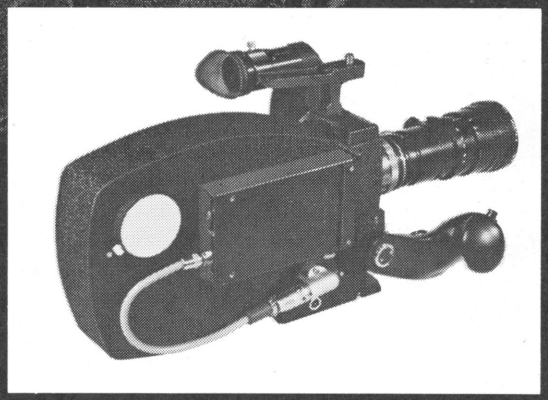

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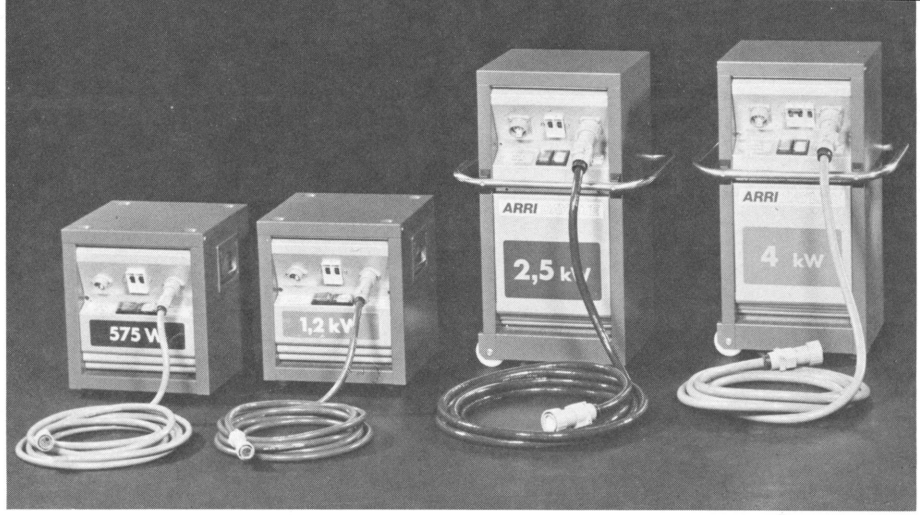
HMI PROS AND CONS
Continued from Page 247

will readily be accepted by the film and television industries.

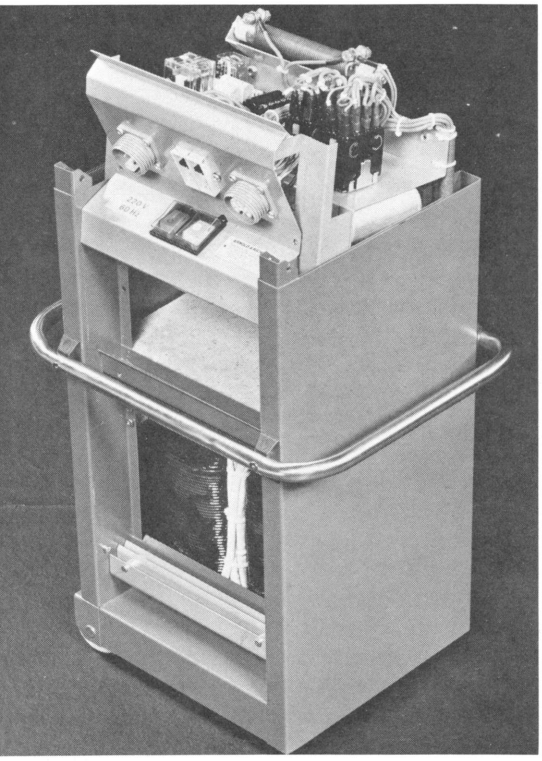
ANALYSIS OF EXISTING SYSTEMS

HMI lamps are basically arc lamps in a controlled "low-pressure" enclosed atmosphere with various gases and other ingredients which produce a spectrum compatible with film and video tape. This requires rather high voltages to ignite the lamp. The existing ballasts require an input of 220 volts. This places a burden on the film industry in the United States. In Europe and most of Asia, the normal operating voltage is 220/240 volts.

The ballasts for HMI, to be used in the United States, Canada, Mexico, etc., must include a step-up transformer from the normal voltage of 120 volts to 220 volts. Therefore, the ballasts supplied to the United States are larger and heavier.



Arnold and Richter HMI ballasts. All are splash-proof and corrosion-proof because of the design of the stainless steel housing.



SAFETY

Also, because there is high voltage in the system, there is a requirement for greater safety measures, particularly the need for an excellent grounding system and a method of determining that this grounding exists.

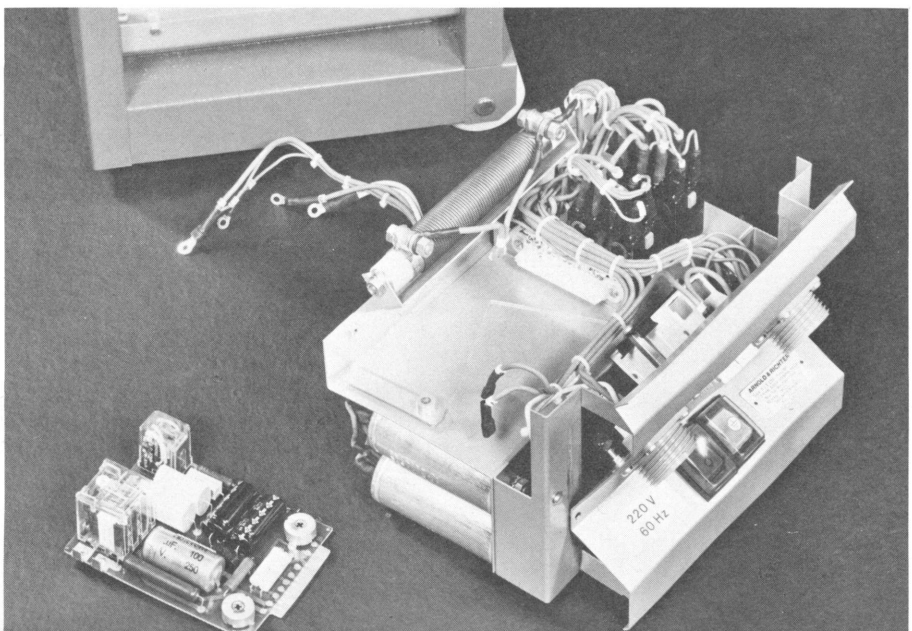
In Europe the safety regulations are much more severe than those in the United States because they are normally dealing with 220/240-volt systems. Since the manufacturers of the ballasts and lights have, in the main, not taken a "systems" approach to HMI, the rental agencies and users have the need to provide a completely "safe" system.

Outstanding in this respect are the Samuelsons in England. They have implemented the equipment supplied by the manufacturers to develop a proper SAFE DISTRIBUTION SYSTEM. As shown in accompanying photographs, the Samuelson distribution system permits the circuit to each light to be tested for ground individually. The unit also includes circuit breakers for each light and a convenient input and output arrangement.

The Lee Brothers, also from London, designed their own distribution and ground-test system. Arnold & Richter of Munich, Ianiro of Rome, and Ryudensha of Japan have a grounding-test system built into the ballast itself. This is most convenient, since it avoids the extra requirement discussed above. The Arnold & Richter (ARRI) system is particularly convenient, since it provides a push-button switch with a tell-tale light to alert the operator of any ground deficiency.

A special comment is necessary when HMI lights are used in the United States. Since most of the older equipment available for rental is composed of tungsten-type or arc equipment and since much of the cable is two-wire, the actual practice for grounding is sometimes inadequate. In addition, much of the cable is used on location for all types of lights. The need for grounding for HMI is much more critical than for other types of lighting. Therefore, it is the opinion of this writer that a grounding-detection system should be a built-in requirement for all ballasts.

(ABOVE LEFT) Arnold and Richter ballast. (BELOW) Modular removable sub-assemblage circuits of Arnold and Richter ballasts. No soldering is required.



HMI MUST BE VIEWED AS A SYSTEM

The development of the design of HMI lighting was rather haphazard. Although at the present time there is essentially only one supplier of the lamp itself (Osram of Munich), there are many suppliers of the luminaires and the ballasts. The igniting circuit which is now installed in the light head is also manufactured by a number of different companies. The ballasts are manufactured by a number of different companies. Therefore, there is no absolute assurance about the compatibility of components supplied by different manufacturers. Luxdyne, a company which manufactures only ballasts,

advertises that it can supply ballasts, standard and LO-MOD, to meet the needs of each of the lighting manufacturers. It is quite obvious that some standardization is required. All equipment should be required to meet the same rigid standards for safety and operation. The film and television industry would best be served if such a set of standards were agreed upon and met by all manufacturers.

DIFFERENT OPERATIONAL CHARACTERISTICS

Almost all of the manufacturers of HMI lights advise that each light can be controlled for ON and OFF either at the head or at the ballast. However, if the main power is turned off, each one of the lights must be turned on again at either position. The Arnold & Richter engineers have developed an improvement. They have devised a circuit which permits each light circuit to "remember" its status. Therefore, the main power can be turned off, and when turned on, all of the lights which were in the ON position will be re-ignited. This is obviously a convenient advantage.

HMI SHOULD BE PROVIDED AS A FULL SYSTEM

Because of the more complex nature of HMI lighting, the need for systems responsibility is desirable. This is particularly true when the equipment is supplied to the user by a rental organization. The rental organization may have HMI equipment manufactured by more than one company and even then the rental company must supplement each manufacturer's equipment with cable and distribution. If the rental company does not have enough equipment for the particular job, it must mix different manufacturers' equipment or sub-rent from other companies. Of course, this is not true if the manufacturing company is also the rental company, such as Mole-Richardson of Hollywood. Here it is in a position to take full responsibility for the functioning and reliability of the entire system.

To this writer's knowledge, there is only one manufacturing company which has designed a complete system from the power supply or generator to the light head, Arnold & Richter of Munich. Their equipment is distributed by their subsidiary in the United States. ARRIFLEX in the United States manufactures the supplemental equipment and takes full responsibility for the entire system. As a result, they are able to take advantage of certain improvements and economies which are available because the input voltage to the ballast must be a minimum of 220 volts, while the power supplies are

Continued on Page 263

TABLE IV
Analysis of HMI Lamp Efficiency
USING STANDARD OSRAM APPROVED BALLASTS

RATED LAMP OUTPUT	TOTAL LUMEN CONSUMED	ACTUAL AMPERES VOLTAGE	ACTUAL OPERATING	ACTUAL WATTAGE PER WATT	ACTUAL LUMENS PER WATT	RATED LUMENS LOSS	% WATTAGE
575	**49,000**	**7.0**	**95**	**665**	**73.7**	**85**	**13.0%**
1200	110,000	13.8	100	1380	79.7	92	13.4%
2500	240,000	25.6	115	2944	81.5	96	15.1%
4000	410,000	24	200	4800	85.4	102	16.0%

NOTE: TUNGSTEN 3200°K LAMPS PRODUCE APPROXIMATELY 30 LUMENS PER WATT.
USE OF LUXDYNE LO-MOD BALLAST RESULTS IN ADDITIONAL APPROXIMATE LOSS OF 8% to 12%

TABLE V
225-AMPERE ARC (BRUTE) VS. HMI LIGHTS
(LIGHT OUTPUT)*

	BRUTE 24 INCH LENS		BABY BRUTE 14 INCH LENS		4 KW. HMI 14 INCH LENS	
	SPOT	FLOOD	SPOT	FLOOD	SPOT	FLOOD
INTENSITY AT 50 FEET (FT. CANDLES)	3240	430	3390	290	1040	**65**
BEAM COVERAGE AT 50 FEET (DIAMETER-FEET)	4.6	26	3.3	31.7	6	**45.5**
BEAM COVERAGE AT 50 FEET (AREA-SQ. FT.)	66.5	2124	34.2	3157	113	**6504**
INTENSITY AT 100 FEET (FT. CANDLES)	810	110	840	**70**	260	15
BEAM COVERAGE AT 100 FEET (DIAMETER-FEET)	9.2	53	6.7	**63.3**	12	91
BEAM COVERAGE AT 100 FEET (AREA-SQ. FT.)	266	8825	141	**12,588**	45.2	26,016

*Provided by Mole-Richardson

TABLE VI
225 AMPERE ARC (BRUTE) VS. HMI SYSTEM
(WEIGHT ANALYSIS—LBS)*

	HMI 4 KW LIGHT WITH STANDARD BALLAST	BABY BRUTE	LITEWATE BRUTE	HMI 4 KW LIGHT WITH LUXDYNE BALLAST
LIGHT HEAD ONLY	60	126	152	60
BALLAST OR GRID	145	67	67	275
TOTAL WEIGHT	205	193	219	335

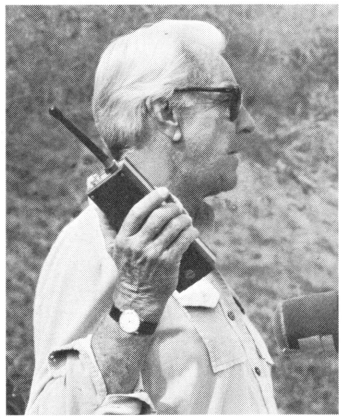
* From manufacturer's specifications

TABLE VII
COMPARATIVE WEIGHT OF BALLASTS FOR HMI LIGHTS
(From Manufacturer's Specs.)
WEIGHT IN POUNDS (LBS.)

SIZE (WATTS)	ARRI input 220 volts	IANIRO input 120 volts	MOLE-RICHARDSON input 120 volts	LTM input 120 volts	LUXDYNE input 120 volts
575	31	38	60	35	95
1200	40	54	83	59	150
2500	55	84	116	121	200
4000	132	143	152	178	275

"Why we switched from tape to 16mm film halfway through."

After shooting 11 of 24 episodes, "The Next Step Beyond" switched to film for better images and lower cost.



John Newland

"Proctor & Gamble were used to 35mm film. It took me a year to persuade them to go with tape for *Next Step Beyond*," says John Newland.

"The shows go to the affiliate stations on tape. And I had used tape on location before. Estimates we got suggested that tape would be less expensive for *this* series, too."

"But on those previous location tape shows, I had directed and edited mostly in the monitor truck," says Mr. Newland. "*Next Step Beyond* had to be shot on more remote locations – and movie style. Directing from camera position, editing later."

Multiple cameras

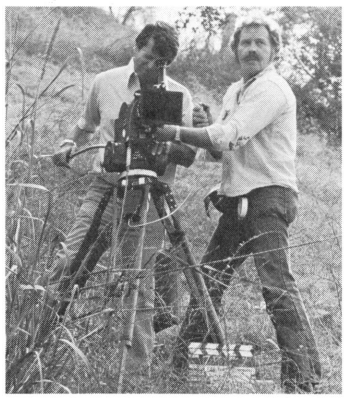
"I started out, years ago, in live television. I'm used to the time-saving rapidity of shooting with multiple video cameras and editing on the hoof. And I've often carried the multiple-camera method over into shooting film for television."

"Our idea was to use the most efficient medium and style for this job. Tape *seemed* to add up... but there was no precedent for using it this way. After we started, we got several calls from other producers asking: *How's it going?*"

"That was a hard question to answer – because, early on, I knew we'd made a mistake. We allowed ourselves to be persuaded that it would get better; but the eleventh show was as intractable as the first."

Long walks

"It hit me one day that both Mike Sweeten and I were spending up to *two hours* of the ten-hour day walking back and forth from the set to the monitor truck. At one beach location, the truck was 100 yards away! That's 300 feet of *sand*."



Camera "B" crew (Bob Isenberg and Rick Nervik) covers another angle.

"We also shot in gullies, forests, skyscrapers and goldmines... Everywhere, the video setup turned out to be impractical for our purposes," says Mr. Newland. "*Working from a booth with standing sets would have been a different story.*"

"We had to make these repeated journeys to the truck because only there could you really see the shot. And, in any case, we had to explain what we wanted to the engineer."

Thin patience

"The video outfit we were working with were all real pros – but the camera operators weren't used to motion-picture work. Mike would have to tell one of them: *Pan left a little... frame a little tighter* ... That wore my patience thin, because I was used to cameramen *improving* on what I ask them for."

"The other major problem was the time and money spent editing the taped material. *It took more than twice as long as estimated.* The video people, again, were real pros. But it was hard for them (and for us) to make accurate estimates on these half-hour shows to be edited movie-style."

Gossamer sheen

"We had spent a lot of time working with the video people to replace the flat electronic look with a gossamer sheen reminiscent of film. At first, the affiliates had been nervous about that effect – but they had grown to love it. So had Proctor & Gamble."

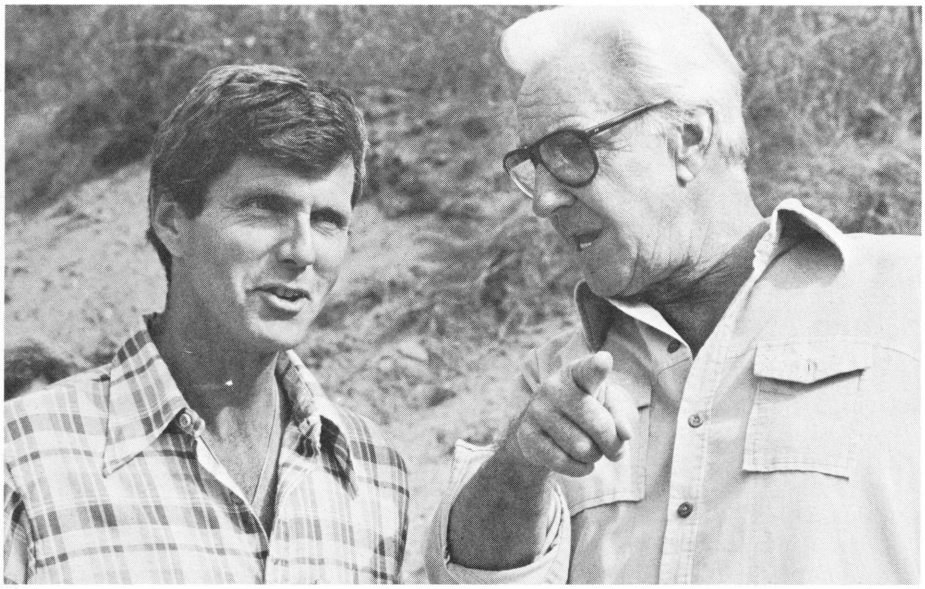
"Now, after eleven shows, I had to tell P&G we had changed our minds! We wanted to revert to film. *OK*, they finally said. And we wanted to go to 16mm. *What??* they said."

"Eventually, I persuaded them to let me shoot *one* show in 16mm. If I'd had my druthers, I'd have gone with the high-priced 35mm gear and paid the tab. But I wanted two cameras..."

Useful lesson

"I was leery of sixteen, then. *But I learned an invaluable lesson.* After using those incredible little Arri cameras, I realize I don't *need* 35mm! For what I'm doing now, I wouldn't use 35mm if I had a billion-dollar budget."

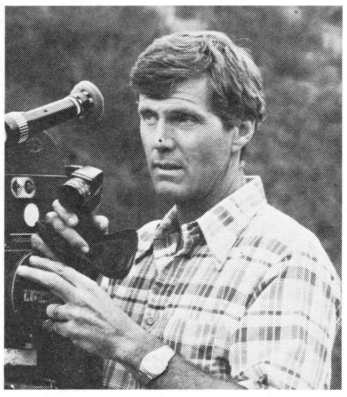
"The SR's instant magazine change saved us endless time and rawstock. With two cameras running, we would deliberately let one run out *during a scene*. Speed and spontaneity are what I'm always after – and those cameras gave me all I wanted and more."



Director of Photography Mike Sweeten (left) with Producer/Director John Newland (right): Two perspectives on the same tape/film story.

"We went with 16mm partly because the lower rental costs let us keep the two-camera system. But we discovered that faster setups were saving us a day's shooting on each show, at around $2,000 a day," says Mr. Newland. "In post-production, 16mm film was costing us *five or six times* less than tape."

"With this equipment, I'm sold on 16mm. When I screened the first 16mm show for Proctor & Gamble, I said: *Just remember one thing. The room is smaller. The screen is smaller. But the quality is identical.* They bought it."



Mike Sweeten

"I had never used tape before," says Director of Photography Mike Sweeten, "And I wasn't crazy about the idea."

"But John Newland wanted a *film* look . . . so it began to seem a challenge. The first setup was exactly that. A dimly lit bar interior up in Fillmore – about fifty foot-candles and a high contrast ratio."

"To the video engineer, our methods must have seemed strange. Low-key lighting, not much fill, plus diffusion and low-contrast filters! But that guy was a genius."

"With his expert help, we began to get a pleasing quality. It wasn't film – but it had less of the sterile look of tape. It was, really, a *new* look. People liked it."

Slow setups

"But the time-consuming setups began to wear us down," says Mr. Sweeten. "Cables all the way back to the truck. Fifty-pound cameras that needed color calibration for fifteen minutes every morning. Color charts every time we changed tape reels."

"And you couldn't judge color quality through the video camera's finder, or even on the portable monitor. To make sure, we had to go back and look at *every shot* on the big screen in the truck."

Unhelpful finder

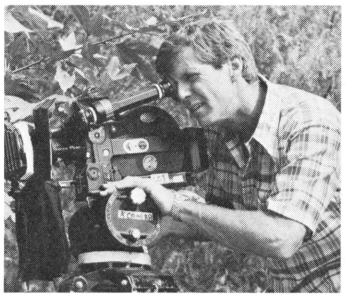
"The video finder doesn't help the operator make subtle visual choices. They're made by the engineer in the truck. The way it looks in the truck is the way it's going home. You have to *be* there."

"I'd say our reasons for switching to film were 25% aesthetic and 75% financial. 16mm was definitely cheaper – but at first I thought the equipment might be less than professional. I was wrong."

Friendly gear

"We rented a pair of Arri SR cameras, and I was delighted with them. After the video equipment, the Arris seemed *friendly* – helping you see what was going on, helping you get the *feel* of it," says Mr. Sweeten. "I felt much more at home, I can tell you."

"Moves were faster. Setups were faster. Magazine changes were faster. The new operators were used to film. With two small, lightweight cameras shooting simultaneously, we got more footage and better footage. *And the look of film.*"



Mike Sweeten lines up a shot with Camera "A."

"With the Zeiss T1.3s, we never had to push the film. Once, we shot inside an enormous theater at twelve foot-candles! Underexposure looks a lot more believable on film than it does on tape."

Any location

"We used the T1.3s on night exteriors, too. In fact, *whatever* the script called for, I could go to the location and just plunge right in. I knew that Eastman, Zeiss and Arriflex could handle it."

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THE KICK-OFF FOR FILMEX 80

In its tenth year, the Los Angeles International Film Exposition bids to outdo itself as the largest public film event in the world

The 1980 Los Angeles International Film Exposition was introduced Wednesday night, January 16, by the first event of the new Filmex season—a gala reception at Chasen's in Beverly Hills, celebrating the unveiling of the 1980 Filmex Poster and honoring five newly appointed Filmex trustees.

Hosts Wendy Goldberg, Filmex Society President, and her husband, producer Leonard Goldberg, welcomed more than 200 guests to the world-famous restaurant. Numerous celebrities from the entertainment, arts, business, political and social communities greeted the new trustees and witnessed the first public presentation of this year's eagerly awaited graphic design.

Since its inception in 1971, the Los Angeles International Film Exposition has been represented each year by a unique four-color graphic, the Filmex Poster. These posters, which feature the work of Los Angeles artists, have become sought-after collectors' items and are among the major works of graphic art produced in the city. They are worthy representatives of Filmex, the largest public film event in the world.

"The Leader", this year's edition, depicts the numerals 1-9-8-0 as frames of the cueing-leader which appears at the beginning of virtually every motion picture print. The upper two frames have smaller circles enclosing the letters "L.A." The Exposition's name, location and dates are beneath in red and yellow against a rich black background. By using these basic images in stark black and white with the diagonal sweeping line shown frozen at four separate points of its clockwise motion, the design emphasizes the unity of international film tradition via the simplest principles of light and motion.

Created by Doug May and Cliff Boulé, the poster was selected from 80 entries in a competition held among students majoring in graphic design or illustration at Pasadena's Art Center College of Design.

This is the first Filmex poster to be generated by a contest, and was chosen by the Exposition's Director Gary Essert, himself an award-winning graphic designer. "The entire range of entries was of such a high quality," said Essert, "that they all deserve to be shown to the public. Happily," he added, "we have arranged to do precisely that." All submitted designs will be on display at the ABC Entertainment Center in Century City throughout the Exposition.

Art Center is an independent four-year college internationally recognized for its communication arts and industrial design programs. Instructors and advisors for the competition were Illustration Department Chairman Phillip Hays, instructor Bryan Birch, and Michael Salisbury, a past instructor who is Creative Group Head at Wells, Rich, Greene/West, Incorporated, the advertising agency for Filmex. Mr. Salisbury created the Filmex poster *"Hollywood Freeway"*, a photorealistic vision of a celluloid freeway with a directional sign for Filmex, and also designed 1974's *"Movie Car"* poster, which depicted a sleek sportscar with the word "MOVIE" on its license plate.

The first work in this award-winning

FILMEX Director Gary Essert and Assistant Director Barbara Zicka Smith at FILMEX Chasen's reception. (BELOW) Wendy (Mrs. Leonard) Goldberg, Filmex Society President and Filmex Trustee, chats with Henry Winkler, star of the HAPPY DAYS television series, at the Chasen's reception. Many film notables turned out to help launch FILMEX 80.

series was *"Chinese Marquee"* designed by Anthony Goldschmidt for the first Exposition in 1971, which depicted the event's site, Mann's Chinese Theatre, in vivid colors. *"Rainbow Movie Screen",* an expansion and continuation of the movie theatre theme, was designed by John Van Hamersveld in 1972. Inspired by the film WAR OF THE WORLDS, the 1975 poster designed by Thomas Ingalls and Gary Essert, showed a spaceship menacing Los Angeles City Hall.

Everyone met *"Blanche,"* their favorite theatre usher, in Anthony Goldschmidt's 1976 contribution. *"Film Strip,"* designed by Thomas Ingalls and Greg Thomas for 1977, swept a swath of abstract film stock across a stark silver background and David Moore's *"Flaming Lens"* of 1978 viewed the Filmex logo through a blazing camera lens.

Guests of honor at the reception were new trustees Gary R. Familian, civic leader and president and chief operating officer of Familian Realty/Investment Corporation; Peter Guber, chairman of the board of Casablanca Records and FilmWorks; Fay Kanin, President of the Academy of Motion Picture Arts and Sciences; Frank Price, president of Columbia Pictures; and Charles J. Weber, president and chief operating officer of Lucasfilm, Ltd.

Also present were poster designers May and Boulé, and other representatives of Art Center. Other guests included actors Charlton Heston, Henry Winkler, Arte Johnson and Peter Bonerz; motion picture executives Sherry Lansing, David Field, Phil Feldman, Alan Carr and Alan Ladd, Jr.; such other entertainment industry figures as Ed Plitt of Plitt Theatres, Inc., Berry Gordy, chairman of the board of Motown Records, and Tichi Wilkerson Miles, publisher of *The Hollywood Reporter*; Leonard Levy, financial consultant; Los Angeles City Council members Joel Wachs and Peggy Stevenson; and Franklin D. Murphy, chairman of the board of the Times Mirror Company.

The 1980 Los Angeles International Film EXposition—Filmex 80—will take place March 4 through 20 at Plitt's Century Plaza Theatres, ABC Entertainment Center, Century City. The Exposition will present more than 75 new feature films from all over the world, as well as 50 special programs.

Among the individual presentations at Filmex 80 will be the first American showing of Volker Schlöndorff's THE TIN DRUM, based on the best-selling novel of the same name by Günther Grass, and the world premiere of ON COMPANY BUSINESS, a controversial American documentary about the activities of the

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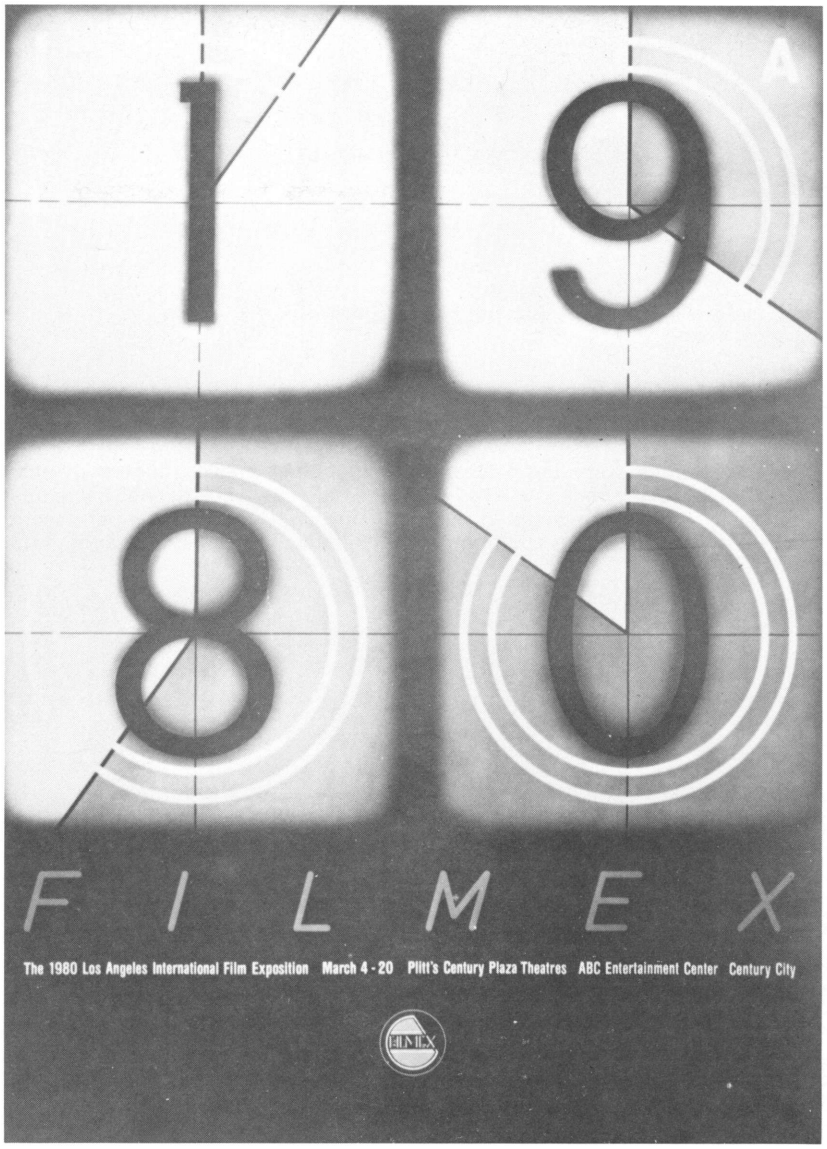
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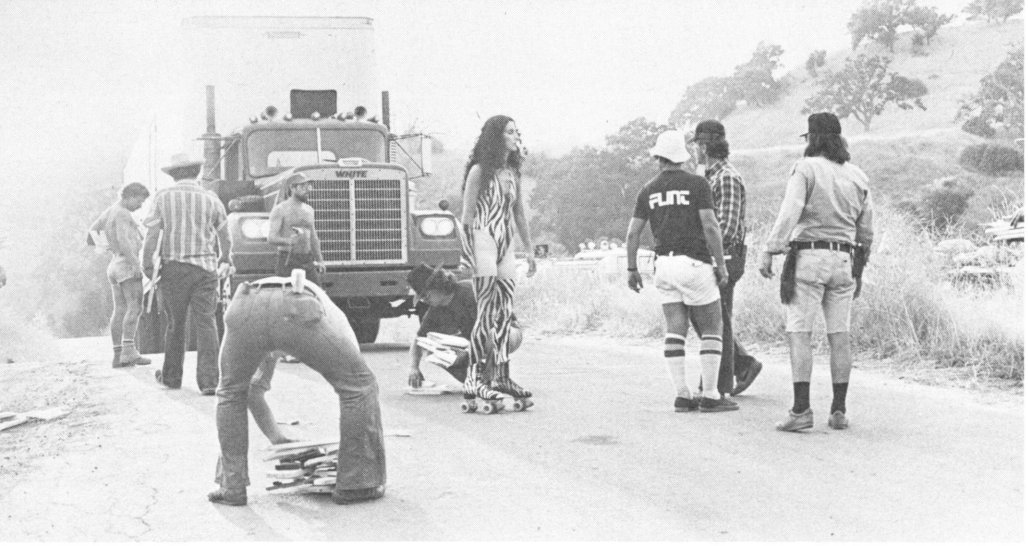
F I L M E X
The 1980 Los Angeles International Film Exposition March 4 - 20 Plitt's Century Plaza Theatres ABC Entertainment Center Century City

***"THE LEADER"*, this year's official FILMEX Poster, represents a stylization of the cueing leader which appears at the beginning of every motion picture print. Created by Doug May and Cliff Boulé, the poster was selected from 80 entries in a competition held among students majoring in graphic design or illustration at Pasadena's prestigious Art Center College of Design. (BELOW) Gary Essert unveils the poster and presents its designers, Cliff Boulé and Doug May, at the Chasen's reception.**



Cher with crew on the road preparing pieces for the roadblock breakthrough sequence, which was filmed at 72 frames per second (1/2-stop underexposed) and pushed two stops. At the opposite extreme, other scenes in the spot were shot at one-frame-per-second stop-motion. The intricate physical and photographic effects lend a magical aura to the final product.

Flint sets crane shot for caravan sequence with cameraman Sean Doyle. (BELOW) At the end of a grueling day on location, the director clowns a bit with Cher, who still manages to look fresh and attractive after 12 hours of hard work in 110-degree heat.

FILMING THE "HELL ON WHEELS" SPOT
Continued from Page 235

very interesting places, not too far away, without permit problems, but they did not have the backlighting I wanted, so his search continued. He found a location that had the perfect road and light possibilities, but there was a very important element missing . . . the gas station! What it did have did not look anything like a gas station. It had a small dark green ranger station. Dan changed hats to Art Director and reassured me that he could make it look like the "funky" station I wanted. He has never let me down before, so Malibu Creek State Park became the place for our show. I supervised the art direction, as Dan beautifully transformed this shack from a ranger station to a country truck stop–gas station. He did this with signs, neon lights, racks of tires, gas pumps, chickens, rabbits, horses, and all kinds of paraphernalia.

The afternoon before the shoot was scheduled, I returned to the studio for our last group production meeting and was met with disturbing news. Roger LaPage, our excellent Assistant Director, had just received a phone call from the head ranger in the Malibu Creek State Park. He had called to inform us that the fire department had called a Red Flag Alert, for the area. They regretfully informed us that we could not shoot there in the morning. You see, it had been 110 degrees for 13 days straight, and fires had been springing up all over the country. In fact, two fires were raging just miles away from the Malibu location as LaPage spoke to the ranger.

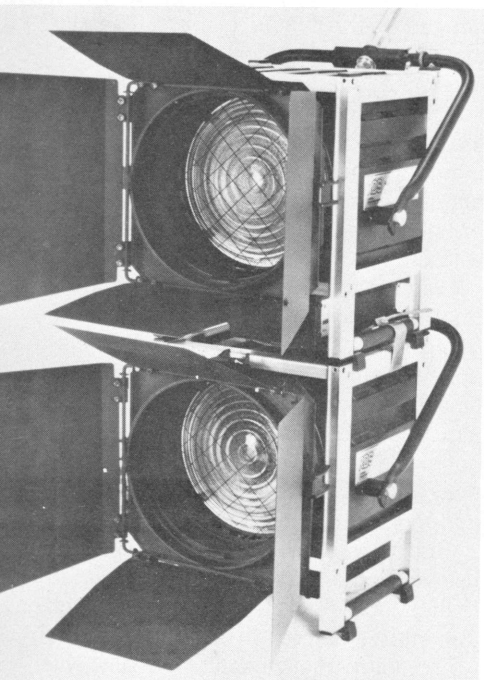
What a dilemma! The cast was booked, the set had been started, the equipment rented, the crew confirmed, the special effects created and the vehicles picked up. And Cher had rearranged her busy schedule to be available for this one day only, before going back into the studio and then on tour in Europe. Thousands of dollars were committed, and now, at the last minute by an act of God, it was off! Roger LaPage assured them that we were well aware of the fire hazard and that we would take extreme precautions to control the large cast and crew with no incident. They would not hear of it. He persevered. After much discussion back and forth, they reluctantly agreed to allow our company to shoot in the park. Roger is great! A terrible situation turned out to be a blessing. With additional fire protection, we were allowed to open the park for our people only. This meant no other traffic or outside interruptions. It was as if a huge country road and set had been created on a closed studio lot, just for us.

Continued overleaf

HMI PROS AND CONS
Continued from Page 257

usually 120 volts in the United States. All of the ballast manufacturers supply the American market with step-up transformers from 120 volts to 220 volts INCLUDED IN THE BALLAST HOUSING ITSELF. This means that the ballast housing is much heavier than needed for its basic function. This extra weight is an important factor, since the ballast should be close to the light head. It is desirable to have the ballast as light as possible because it must be moved around wherever the head is moved. Also, since the standard ballast is being fed with 120 volts (even though 220 volts are functionally required), the cable for distribution to the farthest locations where the lights are required must be heavier and more costly.

The ARRIFLEX engineers decided to optimize the distribution system. They designed "distribution centers" which included various capacities of step-up transformers. These distribution boxes are connected as close as possible to the power supply. As a result, the weight of the required step-up transformer is no longer included in the ballast housing. This results in an advantage in cable size. Now the cable for any current required can be almost 50 percent smaller because 200 volts is fed to the lighter-weight ballasts (see Figures 2 and 3). Each distribution box or "center" includes a RATED CIRCUIT BREAKER to prevent overloading of the power supply. This is particularly important when the lights are powered from standard house current. It prevents the overloading of the building circuits. The "distribution centers" also provide for many three-wire-grounded outlets and simplify the distribution of cable.



Ryudensha (RDS) HMI luminaires can be "stacked" easily and are very lightweight. (BELOW) RDS ballast has a circuit to detect proper grounding.

PHYSICAL AND MECHANICAL DESIGN

Since HMI lights are used on location, it is necessary that the mechanical and physical design be appropriate to withstand the rugged conditions encountered. This includes rough handling, rain, etc. Accompanying photographs show the approaches by the various manufacturers to the design of the ballasts and the luminaires.

It has often been said that he who comes last learns from all who precede him. In a sense this is true about the equipment manufactured by Arnold & Richter. Although they were one of the pioneers in the development of HMI lighting, they only recently completed their designs for world marketing. Thus, they were able to learn from the experiences of the other manufacturers. The following characteristics of their product, therefore, include many of the individual improvements included in the products of other manufacturers, in addition to particular improvements which Arnold & Richter have developed:

The Ballast: For weather and corrosion-proof and rain-proof service, the ballast are housed in stainless steel casings and are designed to be SPLASH-PROOF. The input and output connectors are recessed at an angle to protect the connectors from damage during handling and the angle is such as to reduce any strain on the connector when the cables are installed and used. The modules can be easily stacked for storage and transport.

Modular construction of ballast: In the early days of HMI, adequate provision was not made for easy servicing of the components and the components were not mounted securely to avoid damage during rough handling. The ARRIFLEX ballasts are completely modular and all components are very securely fastened to their respective frame structures to prevent damage during the most severe handling. Each basic unit of circuitry is solidly packaged into a removable module. All electrical connections are of the positive, non-soldered type and fulfill military-type specifications.

SUMMARY

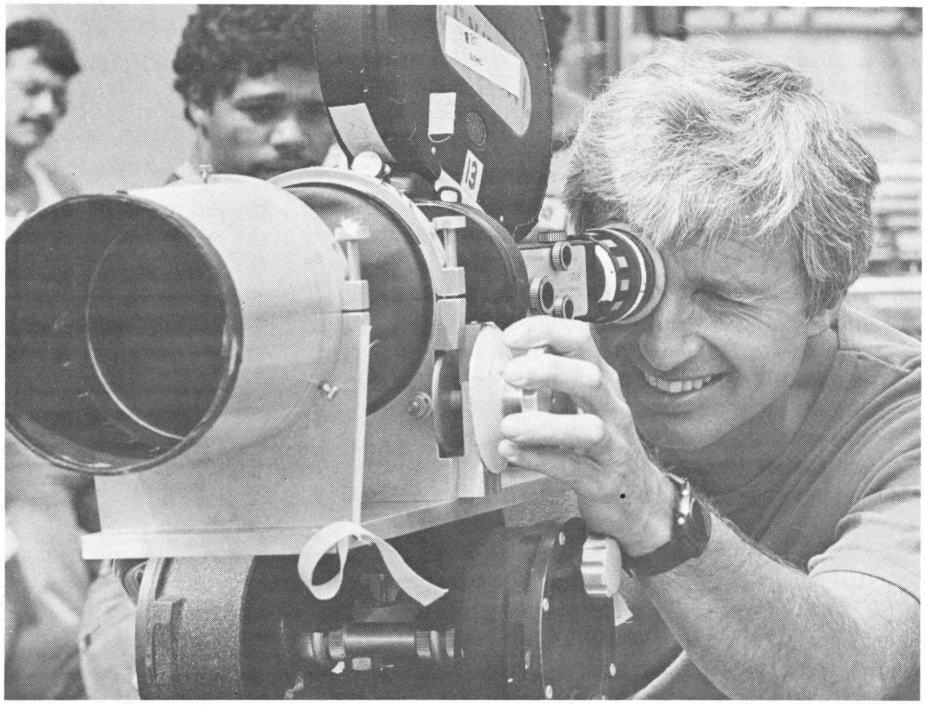
There is no question at all that HMI type lighting is here to stay. In all probability, as improvements are made, it will be increasingly used. The shortcomings of HMI are important, but not of such consequence as to substantially limit its future use.

The advantages are that HMI is a DAYLIGHT source of very high electrical efficiency and is available in a good range of wattages: 200, 575, 1200, 2500 and 4000 watts.

Its shortcomings are that the ballasts are large and heavy and there is a FLICKER PROBLEM under certain conditions. The present solutions to the flicker problem are both costly and excessively heavy in one case, and very costly and available only for the smaller wattages in the other case. The ability to dim the intensity is questionable.

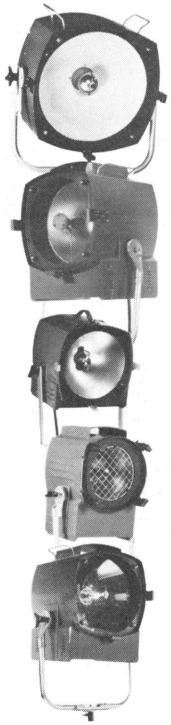
HMI is not ready to replace tungsten as a fundamental source and does not yet have the single source power to replace the Brute arc. Nevertheless, HMI is taking its proper place as an important tool for film and television production. ■

HMI luminaire and ballast manufactured by Ianiro. Ballast has a switch which permits detection of an improper ground. Aluminum housing for ballast provides splash-proof protection.



VICTOR KEMPER, A.S.C.
comments on LTM Lights:

"The first HMI lights I worked with several years ago were bulky and gave us a few problems, but the new HMI's made by LTM are a whole different breed. They're very much smaller, lighter in weight, and their ratio of light output to power drawdown is really surprising; I guess 'energy-efficient' would be the appropriate term to describe them. The advantages of their dependable daylight quality are obvious, too. For example, in an unbroken take from exterior to interior, or vice-versa, you've got consistent daylight all the way. Filters, screens, nets and other modifiers usually are unnecessary. There's no ballast or arc noise to bug the sound man. More could be said, but you get the idea: LTM has done a good job, and their new HMI lights are a pleasure to work with."



In an industry that shouts in superlatives, Victor Kemper is one of the quiet few who need no words to make their indelible mark. Kemper's work says it all. Like "Dog Day Afternoon"... "The Eyes of Laura Mars"... "Audrey Rose"... "The Last Tycoon"... "Magic"... "The Candidate"... "Justice for All"... and many more films of similar stature. To judge by the subtle power of his lighting and camera work, one would think Kemper to be at least a thirty year veteran cinematographer. The fact is that it has been only ten years since he shot his first full-length feature, titled "Husbands"; but unavoidable recognition of his extraordinary talent and sure professional skill has brought him thirty major feature films in that relatively short span. His genuine respect and consideration for the professional capabilities of others has earned Victor Kemper a lot of friends in the industry... and the highest accolade his peers can bestow: "He's one of the real ones."

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This was something that we could not have found at any location, or price. So at 4 A.M. the next day, we arrived and began the shoot.

In order to build anticipation for Cher's entrance, we decided to complement the hard driving instrumental song opening, by shooting the empty country road as it went from night to day. Starting at night created obstacles. Basically, we couldn't see. Even though Roger LaPage and I had gone to the location the day before (when it was light) and made markers where the cameras were to be set, it was still difficult to be sure we were positioned perfectly in the dark. We used polarizing filters across the sky (they stopped at the horizon line) to hold back the exposure. It also was hard to see if the filter was hitting the horizon line properly. To check the shot, we ran a car back and forth, using the head lights to catch glimpses of the road. This was done quickly because the sun would be up in minutes.

There was one little human foible which occurred during this set-up. My car stalled and died right in front of the camera. We only had 30 minutes before the sun would come up to get the shot! We needed every minute of this. To make matters worse, my complex alarm system locked the hood, gas tank and ignition, which made it impossible to open the hood and jump start the car. The minutes were clicking away and the sun was about to come up. We finally pushed the car straight up a hill, out of the way, barely with enough time left to get our shot.

I wanted to have the car lights streak, (that is stretch over the road like elongated neon tubes) appearing and disappearing at the horizon line. At the same time, I wanted to see the sun rise over the mountain at the road's end. This could not be accomplished in one shot. We did the streaking lights with one technique and the sunrise with another.

First, to create the car light streaks, we used the intervalometer motor connected to the Mitchell Mk. II. However, we used the intervalometer in a way that you would not normally use it. Normally, you adjust the dial on the motor so that it closes the shutter for a specific number of seconds, then opens for one frame and closes again for the same interval of seconds. This gives a stop-motion cartoon quality, which can be very effective, but not what we wanted for the car lights. We wanted ribbons of light. So to get this, we reversed the motor, and set the time sequence we wanted. Each time the shutter opened, it stayed open for that particular interval of time (the normal interval it would have stayed closed). I selected ten-second exposures. This is what caused the car lights to streak. In

Continued overleaf

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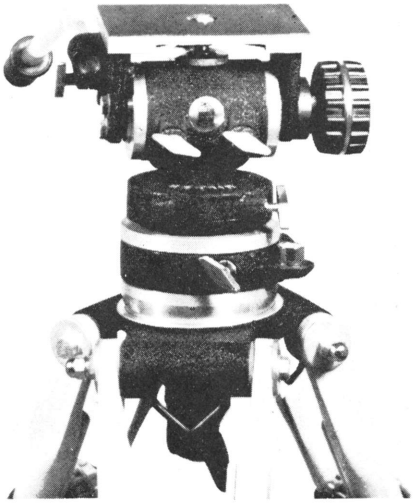

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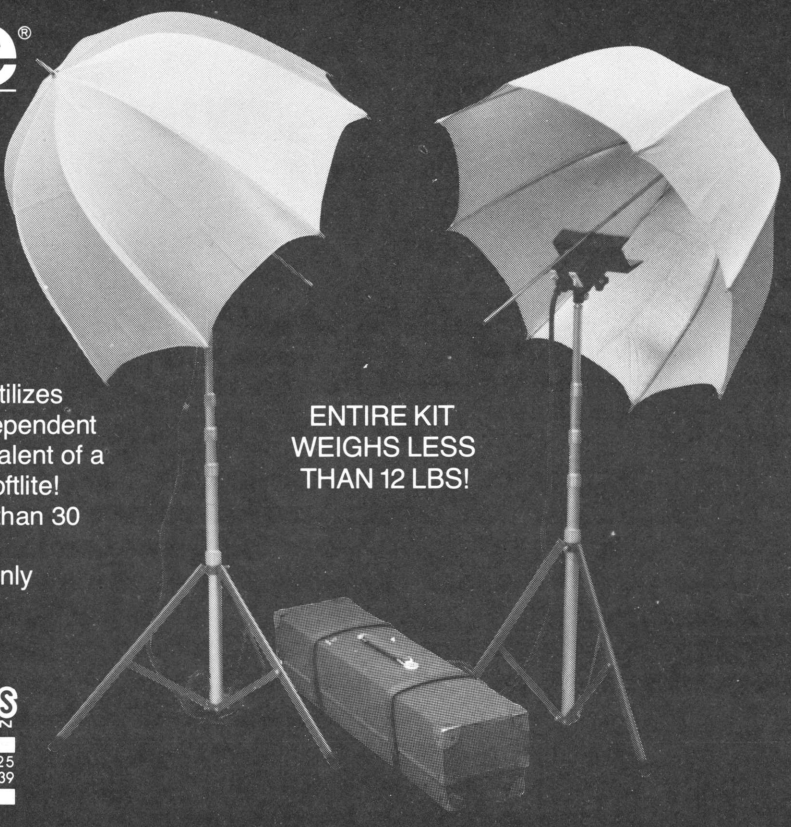

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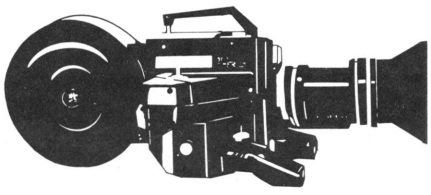

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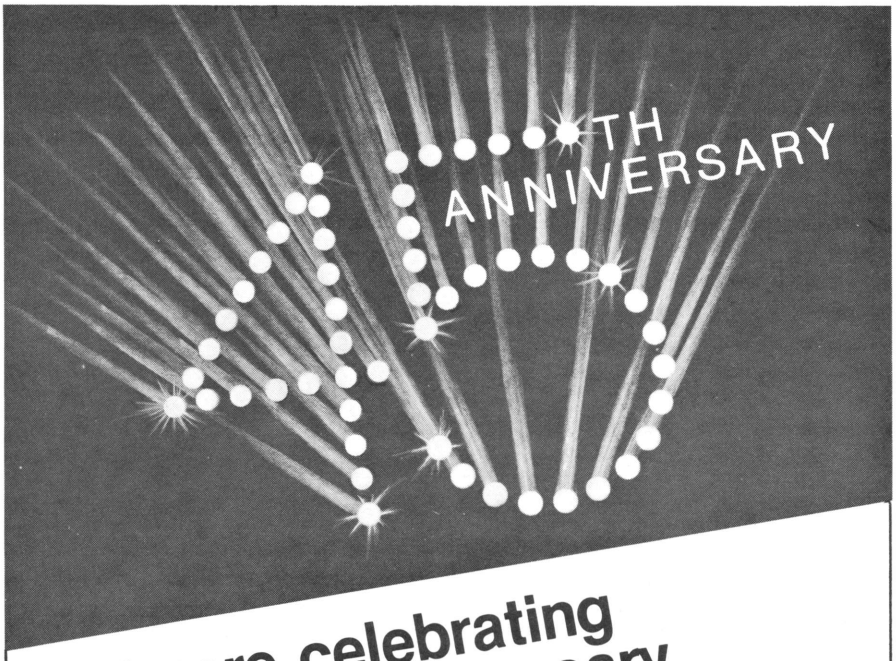

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order to get this illusion, we used only three of our own vehicles. We drove them back and forth on the road, had them turn around, stop and start. Because the camera was low (only one foot off the ground), the lights would go directly in the lens and flare.

This is the look I wanted, but it created somewhat complex F-stop problems. There is no real way to read car lights in the lens (at ten-second exposures) on a light meter. However, I knew from past experience you could usually set the F-stop more open than you would think, even though the exposure is so long. There is a light saturation level when doing light "streak" effects. This means that after a certain level of light exposure, (the streaking area) there is nothing left to expose. It reaches a saturation maximum. We set the F-stop at F/5.6, and it worked.

Secondly, we wanted to film the sun rising in accelerated stop-motion time. Since the streaking and sunrise cannot be shot simultaneously, we stopped after 20 minutes of car streaking, (the equivalent of five seconds of film) and reversed the motor to normal use. Then, without moving the locked down camera, we set the intervals at one frame every ten, fifteen, and then twenty seconds, to shoot the stop motion sun rise. Sean Doyle (first camera) brought the F-stop down (letting in less light) and used a gradation filter to keep the sun (it was in the lens) from over-exposing the film as it got brighter. This allowed for some sky detail. Later, the two pieces of film (car lights streaking and stop motion sunrise) were combined by Bob Johnson at Modern Film Effects, to make one bizarre optical image. It created an exciting, pulsing rhythm of lights which go perfectly to the beat of the music, while the sun rises, lighting the scene. The illusion was fantastic!

The cameras were then set for Cher's entrance. Most all of the photography was done with long focal length lenses. On the first day, we shot primarily master shots. Two cameras, a 35mm Mitchell Mk. II. and a 35mm Arriflex high-speed 2C, were used. Sean Doyle and Jim Gillie shot the wide shots (on location). I shot the closeups (that day and later on the two insert days). We shot primarily with a 20:120 and a 25:250 zoom and sometimes with a 50:500mm lens extender, or with a 600mm lens. We kept the backgrounds relatively soft with Cher backlit at all times.

Cher makes her entrance in an outfit designed by Bob Mackie, and it was everything that she said it would be. A skin-tight tiger-striped, pink, black and white body suit that laced up the front,

Continued on Page 300

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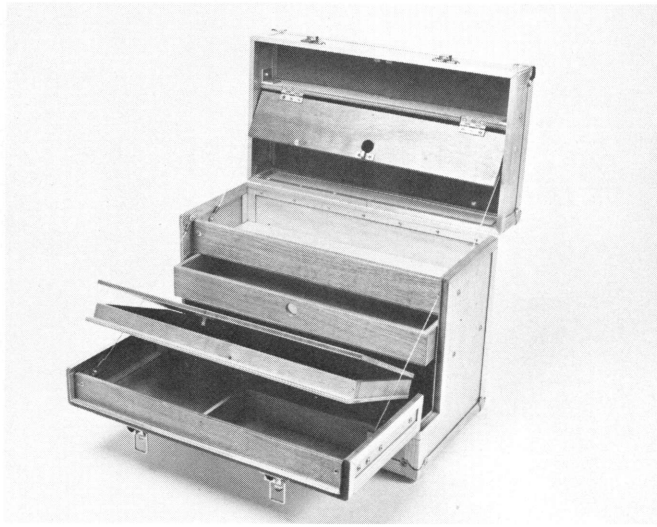

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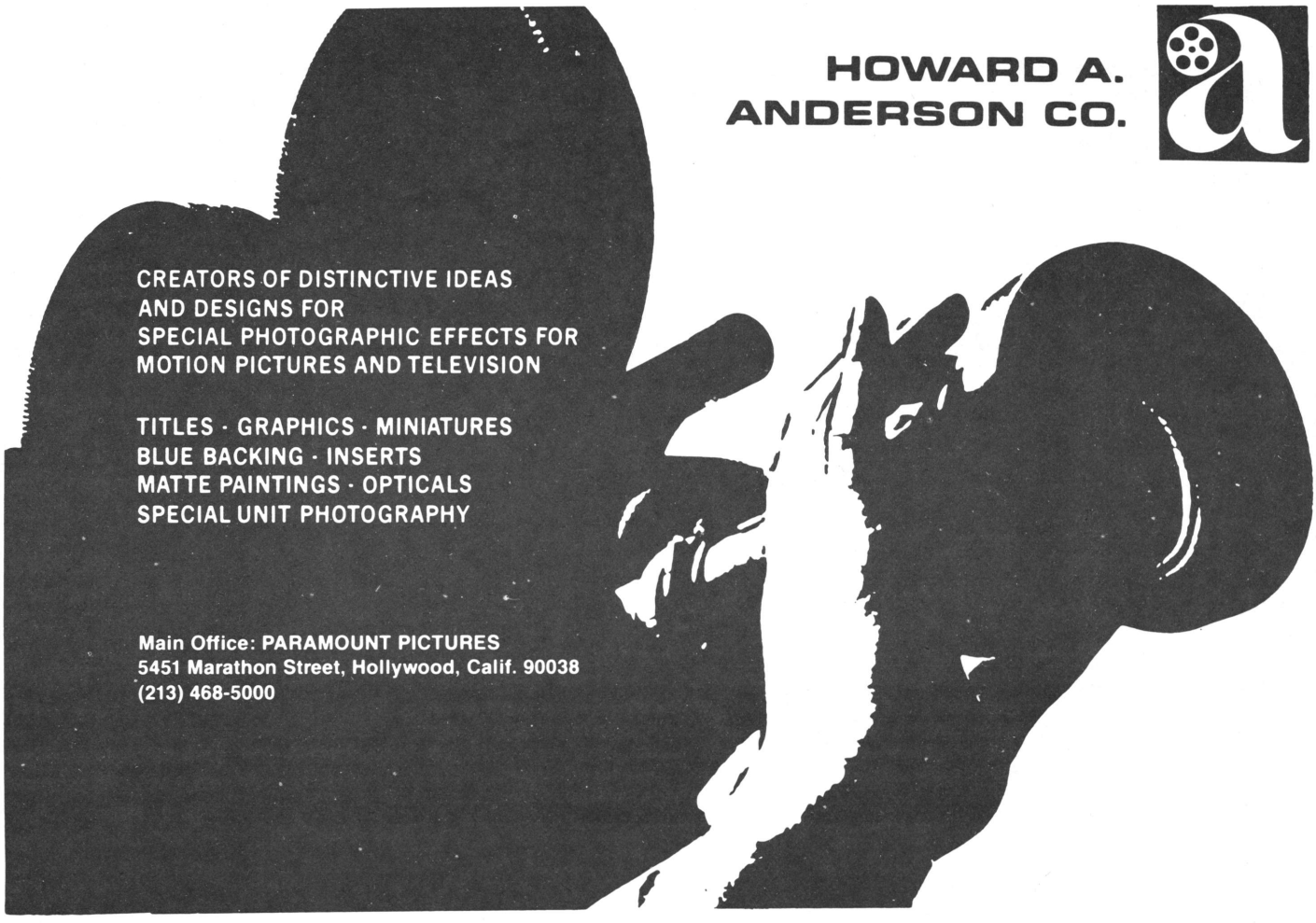

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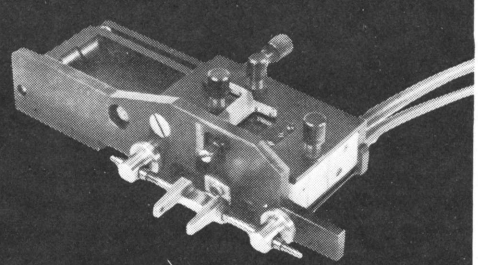

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A.F.I. SEMINAR WITH WISE AND KRASNER
Continued from Page 249

MILTON KRASNER: We had a good relationship on the picture. I knew what you wanted and you knew what I could give you.

HOWARD SCHWARTZ: How much preparation time did you have on it?

MILTON KRASNER: We had about a month or so on it.

ROBERT WISE: THE SET-UP had an abortive history starting. I was under contract to RKO then. I had just been assigned to the picture and we were just getting going on it. Howard Hughes had bought the studio just a few months before that. I had been given the assignment to direct it by Dore Schary and had been on it only a week or two when Schary and Hughes got into some kind of a fight and Schary walked out of the studio and Hughes shut everything down and I was laid off. Finally, because there had been some sets being built and we had a certain amount of production planned, the guy running the studio for Hughes, Sid Rogell, was very anxious to get something going under his aegis at the studio. He knew this picture was a small one and could start quickly because of the preparation we had already done and he talked Hughes into letting us go with it. I had been talking with Milt before that and I was reassigned to it.

QUESTION: Was this something you were really pushing for, this film?

ROBERT WISE: I already had the first draft of the script. Richard Goldstone was the producer and he developed the first script with Art Cohn. Art was killed in that plane crash with Mike Todd a number of years ago. Art had been a sports writer in Long Beach and San Francisco so he knew the fight game. I heard about the script, got a copy and read it and was dying to do it. I had just finished BLOOD ON THE MOON with Bob Mitchum.

QUESTION: There's a good deal of footage and quite a bit of time spent on the fight. It was wonderful footage. Since it wasn't story boarded, what was your game plan on that? How did you go about it?

ROBERT WISE: Well, it was all choreographed. There was a man who is no longer with us named Johnny Indrisano, a marvelous guy. He did the BODY AND

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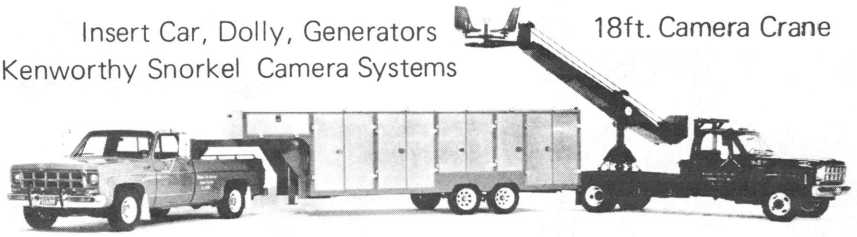

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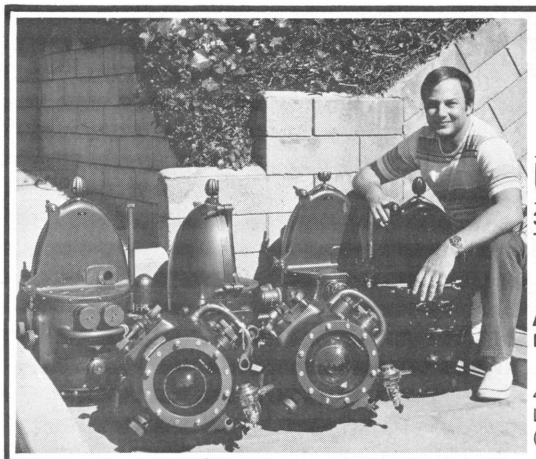

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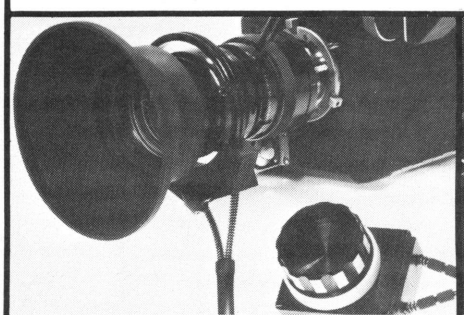

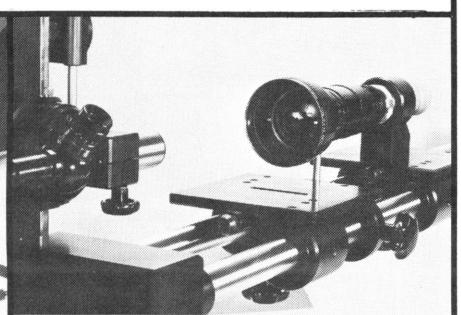

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SOUL fights, probably all the top fights in town. He had been a fighter himself, a top fighter. He got into the business out here before I ever came along. So Johnny was the one who worked with Ryan and the other fellow. The other fighter was not an actor. He was a young club fighter around town and since it was a very small part with very few lines, I felt that if we got a real fighter, we'd have a leg up. Ryan himself had been an intercollegiate heavyweight champion while at Dartmouth so he could handle himself. Johnny would write up each round and talk them over with me. Then he'd go down to the old Hollywood "Y" on Selma and work with these guys in the ring. I would go down on a Saturday afternoon and they'd show me a run-through of it. I'd make my comments on it and we might change a few things. So the whole fight was choreographed over a period of a few weeks before we started to shoot. When we went to film it, I'd talk to Milt about cameras. We had three cameras; two outside for each section. We'd rehearse a section because you can't do too much of the fight at once, just 20 or 30 seconds and that's it. Also we had the hand-held inside. We'd start the beginning of round one and see where the first section was, do 20 or 30 seconds and then cut. We got marvelous cuts from the hand-held camera. Incidentally, that's the last time I ever did any actual cutting. I found I couldn't resist it. I'd been directing since '43 and this was made in '48. "Butch" Gross was the editor and he was doing a swell job but I just couldn't keep my hands off of that fight film. I finally said, "Butch, let me have a room next door and let me cut the fight, O.K.?" I cut the whole fight.

QUESTION: How much time did you spend on that sequence?

ROBERT WISE: I don't know, about eight or ten days, I think. I know we went over time. We had 22 days scheduled for the whole film and we took 27. The picture cost $495,000, and that included about a 40 per cent overhead. That's the way all the fights are done, ROCKY or any of them, they are really choreographed that way. I don't know who's doing the fights now, but there was another fellow around town named Mushy Callahan who did a lot of them but I think Johnny was the best.

HOWARD SCHWARTZ: The long lens shots with the lights and everything were just super.

ROBERT WISE: Milt said, "Just let it go, let it flare, let whatever happens happen, just get in there and get it." We shot the

whole fight with the three cameras. Who was the hand-held operator?

HOWARD SCHWARTZ: Dick Duvall, I think.

ROBERT WISE: Dick Duvall. We would rehearse it and he'd say, "I think I can get this one." And he'd get in there and get the best pieces he could. I knew I couldn't look through and see what was actually happening so I left it up to him.

MILTON KRASNER: Howard was a good assistant in those days. He knew what he was doing.

ROBERT WISE: THE SET-UP was a labor of love for everybody concerned. Ryan was just dying to do this story he loved it so much.

MILTON KRASNER: Talking about the writer, Art Cohn, he and I bought a story called *The Orchid Man*. It was the life of George Carpentier. Art died right when we were going to go to work on it; he was killed with Mike Todd.

QUESTION: The locker room scene was very good. Did you get boxers who knew acting or actors who knew boxing to act in that?

ROBERT WISE: I was determined to get this real feeling of the fight game. I haunted the fight arenas around this area. There used to be a rundown arena in Long Beach, and that's where I got a lot of my material, all the attitudes and the business. I was down there every week making notes, recording and photographing. Then I got actors to do as close as they could to what I had seen there. I watched audiences too. A lot of the business in audience reactions is from there. The fellow with the radio I saw at the Hollywood Legion, same with the guy with the cigar and the fat man. The blind man may seem far-fetched to you but he was an actual character in San Francisco that Art Cohn used to see regularly every Friday night at the fights. He'd come with his buddy and have him describe what was going on.

QUESTION: Did he used to say, "Go for the eyes"?

ROBERT WISE: Yes, he was the most bloodthirsty of all the spectators.

HOWARD SCHWARTZ: You made them all really believable, too.

ROBERT WISE: We had a problem having only one section of the arena

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built with all the seats. It held about 250 people. So what we had to do is shoot everything where we had the 250 people in—In other words before the fight starts, the lights are up and they'd go down when the fight would start. When the lights went up again at the end of round one we had to cover in between the rounds. We had to use that same corner for both corners.

MILTON KRASNER: We had to transpose everything.

ROBERT WISE: We had to utilize those 250 people for the couple of days we had them to do all the stuff with the lights up. That meant I had to go out of continuity with the make-up on the guys, particularly with Ryan who got all beat up. I had a make-up man work on that. We had sketch artists working so I'd know what Bob was going to look like at the end of round one, round two, round three, and at the end of the fight. I had to shoot all of that before I shot the fight. These are some of the things that go on when you're on a short budget. Then when the fight was on, we had seats all around the ring holding about 60 or 70 people in the first two rows. Behind that was the black cyclorama and smoke going up and the little blinking lights were cigarettes and all. It works because that's all you see in a real arena when you're there anyway.

HOWARD SCHWARTZ: You really spent a lot of time in preparation of the fight arenas then.

ROBERT WISE: Yes, we were down at Ocean Park where we shot the interiors on several different weeks.

QUESTION: Was the time element always a part of the story, the fact that you'd go in real time?

ROBERT WISE: Yes. I think it's one of the few instances that it's ever been done on the screen. It takes place in the elapsed time. To cover ourselves on that, we made about four different times on the end shot with the clock. I had to guess what the final cut was going to be so I made it about three or four minutes different in each one. When we cut it together we selected the final shot that was the closest to our finished cut in timing.

QUESTION: In regards to story boarding, how can you story board accurately if the blocking isn't clear?

ROBERT WISE: Well, we try to make it clear when we talk it out in the office. In our films, we very seldom have the luxury of having the actors ahead of the shooting to rehearse and block. Once in awhile you have it, it all depends on how it breaks down in your schedule. The minute you start working with an actor and rehearsing him, he goes on the payroll. If he's an important actor but doesn't start until the third or fourth week of shooting, you have to pay him all that time and studios don't like to do that. I've had to start many films without even having an hour of rehearsal. I'm lucky to have a read-through of the script. On STAR TREK I had no rehearsals; I just stumbled into a start and we did "stumble," because we weren't ready to go at all when we started. Fortunately I had all those actors who worked in it before. So you have to be able to get a jump on the thing and know where you're going and how you want your picture to look by doing it ahead of time just with your key people, sketching it out, blocking it, and hoping that it works. Sometimes we're right on, I'll go in and shoot a sequence just as we planned it, other times it just doesn't work at all.

QUESTION: If you go on the set without having your actors doing a rehearsal, I find that it just rattles everything, with blocking and everything that they're not comfortable with. It seems to me that if you don't have them before that it would cost the production more to be rehearsing on the set.

ROBERT WISE: I find that most actors are pretty professional, they've been doing it and can pick things up really quickly. It varies. If I haven't had a rehearsal period before starting a film and I start on a new sequence with people (you always, of course, have talked with your actor before you start shooting so you know he's seeing the character as I do, that there's no big divergence on that), you go in and sometimes if you have a three or four-page sequence with a few actors you might get it blocked out really quickly, three quarters of an hour or an hour. Other times it might take all morning and you tell the crew to go away for awhile until you get it right. You hope you don't have too many mornings like that.

HOWARD SCHWARTZ: That used to happen a lot more than it does now because of the time and budget problems and all that.

ROBERT WISE: Then, many directors work differently. George Stevens, Sr. used to take an awful lot of time. He used to rewrite on the set and it would take most of the day. He made marvelous films, so it's just a different way of doing it.

MILTON KRASNER: Scene by scene, day by day. Gregory La Cava did MY MAN GODFREY when he was in an

Robert Wise surrounded by the stars of STAR TREK: THE MOTION PICTURE, on which he functioned as director. Wise began his film career as a messenger at RKO Studios, worked his way up through the editing department and eventually edited such classics as Orson Welles' CITIZEN KANE and THE MAGNIFICENT AMBERSONS. He received his first opportunity to direct in 1943 and has been a top-ranking producer/director ever since.

ambulance. It was pulled up to a back stage.

HOWARD SCHWARTZ: George Stevens had a great way for going home early. He liked to shoot things from reverse angles so he had these big sets and about 4:00 in the afternoon he'd go to his key grip and say, "O.K., we've got it this way, now I want to shoot it the other way. How long is it going to take to pull out the other side of the set and put this one back?"

ROBERT WISE: So he'd get out early wouldn't he?

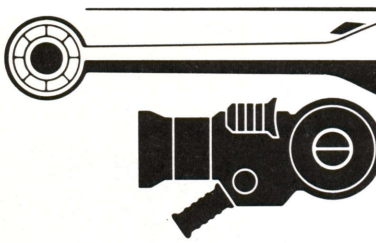
HOWARD SCHWARTZ: Yes, he'd leave while they were working. He'd spend a lot of time on those big sets like that.

QUESTION: How do you go about selecting a cameraman?

ROBERT WISE: Well, I usually look at each project in terms of what it ideally wants to look like on the screen. Then I try to cast a cameraman like I would cast an actor, the man I think would be closest to ideal. I had seen Milt's work earlier on a number of things, knew his work, but had never worked with him. I knew the kind of texture he could get for me and that he wasn't a conservative. In those days you had a lot of conservative cameramen that wouldn't try new things, wouldn't experiment or take a chance. Milt had a reputation of saying, "Let's give it a whirl." So I met with him, talked about the script and that was it. Then we collaborated very closely in terms of how it was going to look, the tone, the feel of it, the texture. And then I'd leave it up to him. I can, to this day, still go on a set and look at the way the cameraman has it lit and not be quite sure what it's going to look like on film. That's because of the difference in films, f-stops, this, that and the other, so I'm always anxious to see the dailies and how they turn out. I have the say on all my films of who the cinematographer will be. Sometimes I'll repeat someone, sometimes not. There's always a great collaboration. Sometimes I will have whole concepts about how a certain sequence should look and be turned around by a cameraman who'll come in with another approach I hadn't conceived of. But once the dialogue is out of the way, and the overall discussion, then it's his baby.

HOWARD SCHWARTZ: Another lesson there: Please the director, not the production people. He's the guy you're

Milton Krasner, ASC (center) at work as Director of Photography on the lumber train sequence of the MGM film epic, HOW THE WEST WAS WON. (BELOW) Krasner (in front of camera, wearing necktie) directs the photography on a roller skating sequence featuring the late Marilyn Monroe and Cary Grant for the comedy feature, MONKEY BUSINESS. Krasner won a "Best Achievement in Cinematography" Academy Award for THREE COINS IN THE FOUNTAIN.



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doing the job for and it's important the time you take to please the director. Keep him happy and you'll be around for awhile.

QUESTION: I presume that there was no consideration between the use of color or black and white film due to the production budget, but if you were given that choice today, would you still use black and white?

ROBERT WISE: Yes. I don't think you ever really get the reality, the complete reality in color that you get in black and white, no matter how you desaturate the color or treat it. The whole process of photography picks things up anyway, doesn't it? The highlights are brighter, the shadows are darker, blacker. So if you have to show scenes of poverty or filth or low life, it's more difficult in color. We've made headway in more recent years with the developments in photography and toning colors down and desaturating them, but I think for the real smell and grit like those dressing rooms, I don't think they can get it in color. I didn't do my first color film until about '53.

HOWARD SCHWARTZ: Those were the three-strip days at Technicolor, before the single strip. You had to have a commitment with Techicolor a year or two years in advance to get the cameras. They only had so many cameras. If you were doing a low-budget picture, then forget it. There was a producer at RKO and the only reason he was a producer was because he had about four Technicolor commitments. To get the camera and be able to do it in color, he was the supervising producer, a stockholder or something.

ROBERT WISE: My first color film was in three-strip. That was a monster to horse around with. Remember the "blue goose"?

HOWARD SCHWARTZ: The ice-box.

ROBERT WISE: It was a terrible thing to deal with.

QUESTION: Could you talk about your background as a film editor and how it's influenced your directing, and how you made the transformation?

ROBERT WISE: Well, I started working in the film shipping room, working my way up to sound effects editing and music editing for a couple of years. Finally, I got put over on the picture side and became an assistant film editor and

Continued on Page 291

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PHOTOGRAPHING "FREE CLIMB"

A *cinema verité* approach makes possible the filming of the first free-climbing ascent of the 2,000-foot vertical face of Half Dome

By ROBERT GODFREY

Films about mountain climbing have in the past tended towards two extremes: hoaky or boring. The hoakiness has come from the tendency of directors to add Wagnerian dimension with music and effects, and to use the Orson Welles style of narration. Those at the boring end of the spectrum stem quite naturally from the fact that mountain climbing is generally a slow, plodding, somewhat pedestrian activity. There is a repetitiveness to mountain climbing that is dulling. Once the climber has moved upwards in half a dozen different ways, a ho-hum audience response tends to accompany his further efforts.

I had known for six years of Jim Erickson's ongoing attempts to make the first free-climbing ascent of the two-thousand-foot-high vertical face of Half Dome in Yosemite Valley, California. In free climbing, ropes and equipment are used by the climbers for safety, but they are not allowed to pull up on them. The climbers make extremely gymnastic upward progress using only the natural holds on the rock. The pioneers who first climbed Half Dome had accomplished the ascent by hammering in steel pitons for most of the way and using rope ladders. Erickson, one of America's leading rock climbers, was committed to making an all-free ascent of Half Dome. Analogous to a golfer picking up the ball with his hand and placing it in the hole, for Erickson to pull up on his equipment on Half Dome would disqualify the attempt.

Between 1971 and 1977 Jim Erickson had made eleven different attempts to free-climb Half Dome. Each time he had reached higher on the face, but had never done the whole thing free.

Enter the filmmakers. The agreement negotiated with Jim Erickson and his partner, Art Higbee, was a *cinema verité* relationship between film crew and climbers. The essence of the arrangement was simple. Filming was not to interfere with climbing. The climbers would not be asked to do anything special for the cameras—no retakes, no tricks, no fake falls. The outcome of the film was tied to the outcome of the climb.

The factor which made the *cinema verité* arrangement workable was the assumption that there was sufficient *natural* tension and drama in the climbers' efforts to give an exciting film. I also felt strongly that, for the film to work, it was important to get to know the two climbers as people—to be able to identify with them, to understand their hopes and what made them tick. To this end we filmed them in a variety of situations off the rock face.

Jim Erickson had been married for a year prior to filming. His wife, Nancy, was expecting a baby. We filmed Jim at work and at home, developing a picture of him as a person as well as a climber. Nancy turned out to be a real scene stealer, and her natural sassiness on camera as she expressed her viewpoint, somewhat different from Jim's, lent a valuable dimension to the film.

On Half Dome, the *cinema verité* approach posed certain technical problems. First, the camera crew would have to be able to move as quickly as the climbers, and film without getting in the way. A very specialized crew was needed—top class filmmakers who were also expert technical climbers. Eventually a crew of ten was assembled, all capable of functioning in Half Dome's vertical environment. Tom Frost and Greg Lowe were the cameramen. Both were expert climbers and experienced cinematographers.

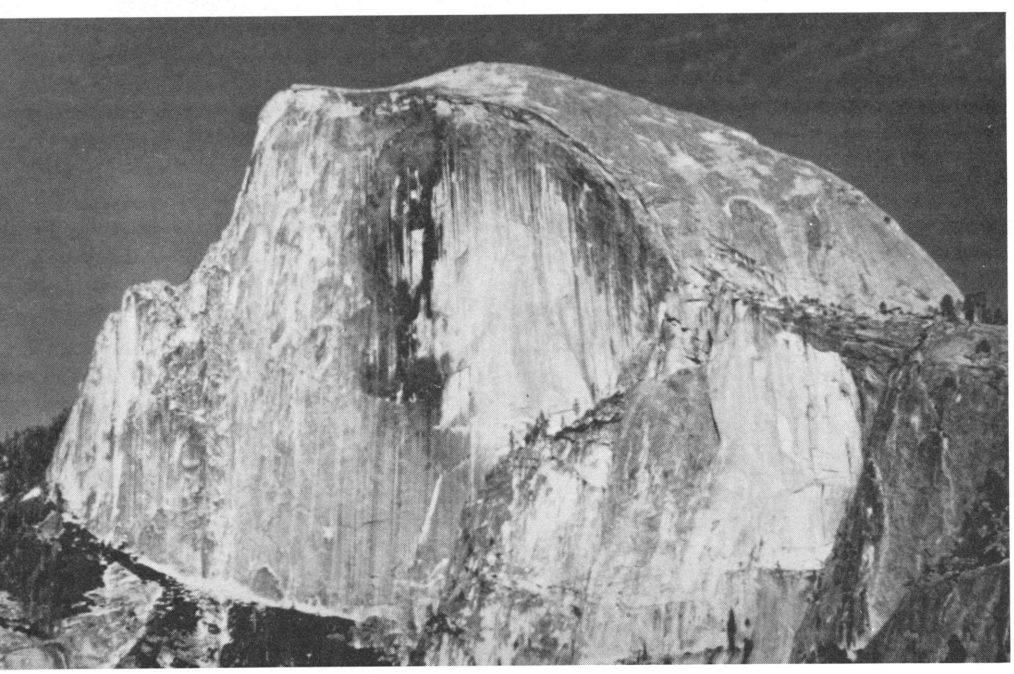
In order to keep up with the climbers, the film crew adopted technical climbing techniques for moving up the face, travelling light and fast.

Eclair ACL cameras with two-hundred-foot magazines were chosen for lightness and simplicity of operation, and the plan involved doing sync-sound on the face. To this end, a Nagra 4-2 was used on ledges, and the Nagra SN for more inaccessible situations. We did not have the climbers actually wear the SN, as I felt that the sound quality so obtained, with heavy breathing and clothes and equipment noise, was not what I was after. Rather, we used the SN with shotgun mike and crystal sync.

In planning shooting, I divided the face into three main zones of coverage: the first six hundred feet, a section of some four hundred feet in the middle, and the final four hundred feet at the top. These three sections included the most photogenic climbing on the face, and would give comprehensive coverage of the ascent.

On the first six hundred feet, crew members climbed up a few days before the climbers and suspended fixed ropes a few feet to the side of the climbers' route. Closeups were essential if the film was to come alive. Also, my personal preference for shooting climbing action is to be right there next to the climber, slightly above, looking down, with a wide-angle lens. This puts the climber quite large in the frame, while at the same time using the perspective of the wide-

The formidable 2,000-foot-high northwest face of magnificent Half Dome in Yosemite National Park, California has long presented an irresistible challenge to mountain climbers. The objective now was to climb it using ropes and equipment only for safety, but without pulling up on them to aid the ascent.



angle lens to capture the hundreds of feet of space dropping away beneath, and the ground below. These are effects that are impossible to capture with medium- or long-focus lenses. So, we put a great deal of effort into being right there next to the climber as the action was happening, and these efforts were to pay off handsomely.

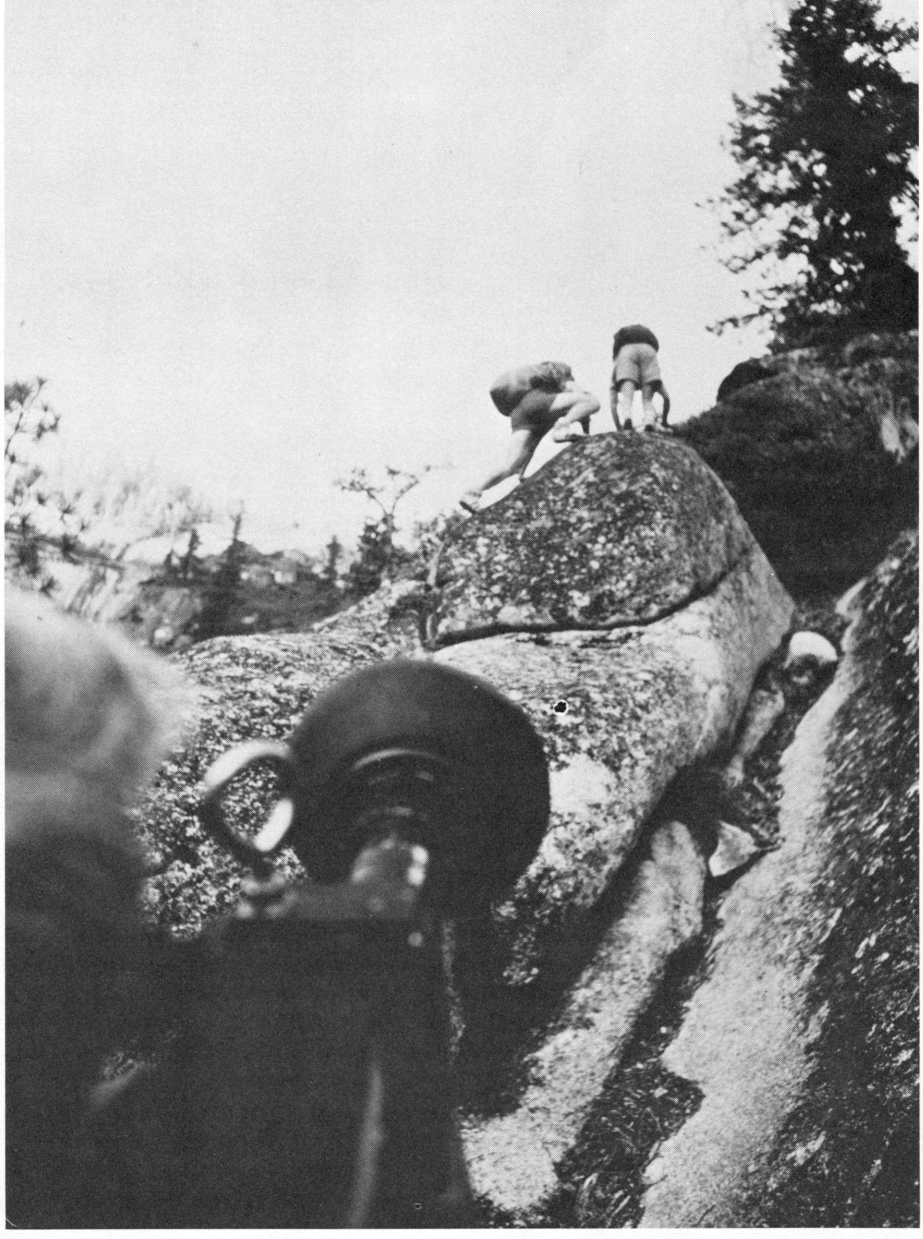
With the fixed ropes in place on the first six hundred feet, two camera crews coordinated. One cameraman and one assistant, Tom Frost and David Breashears, were on the fixed ropes next to the climbers. A second crew worked from the ground with a long lens, tripod mounted. Tom and David moved up the ropes using Jumar Clamps. These are metal, spring-loaded devices that clip onto the climbing rope and take the climber's weight. Using them, Tom and David were able to speedily move up the fixed ropes alongside the climbers and adjust their vertical height on the ropes with great precision, getting in just the right place for the best angle.

A second advantage of shooting from the fixed ropes was that the cameraman was able to pendulum from side to side a distance of approximately twenty feet. This spectacular, but actually extremely simple, maneuver enabled Tom to move in and out from the action easily and take a varied range of shots from extreme closeup to medium.

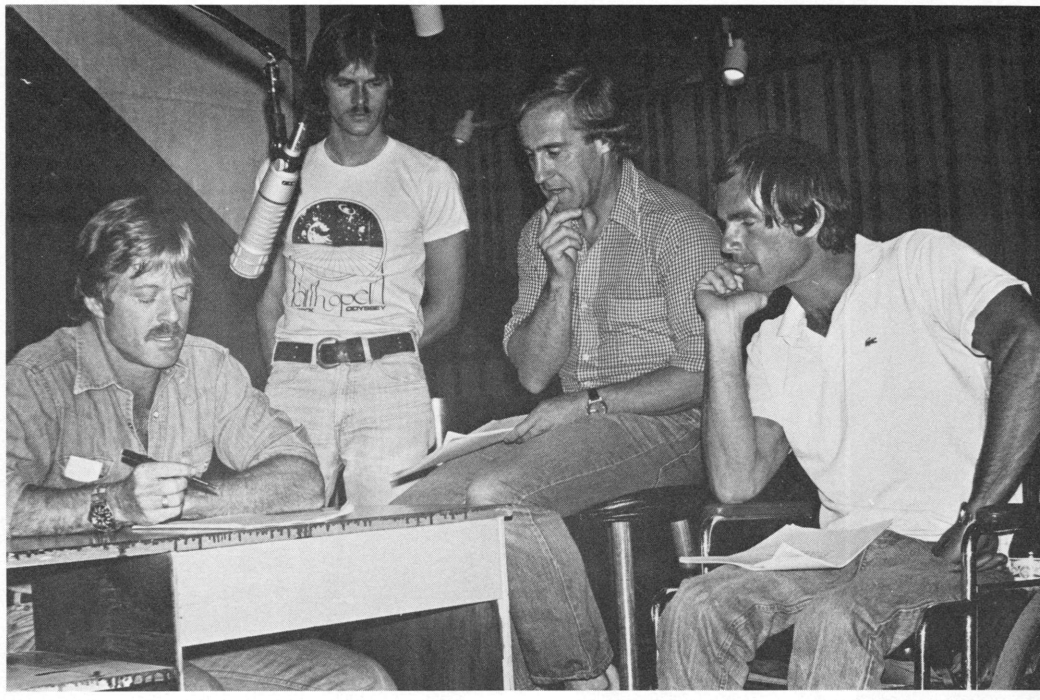
The assistant cameraman's job was to reload the ACL magazines and to help position and steady the cameraman when needed.

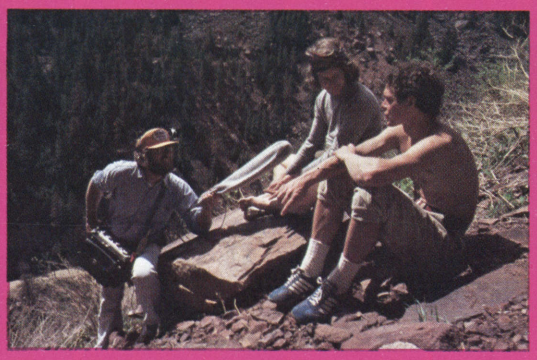
During the first six hundred feet of climbing, Tom and David, filming from the fixed ropes, would occasionally duck out of sight by hiding behind corners of rock or by lying flat on ledges, to allow the ground camera to get a clean long shot. Coordination for this was accomplished quite easily. Half Dome's face is concave and acted as a natural sound amplifier. The ground crew was able to maintain voice contact simply by shouting without the need for walkie-talkies. This arrangement worked perfectly and later, in the cutting room, we had a varied range of shots from both camera positions to intercut into scenes that put the two climbers into perspective on that enormous sweep of rock, with plenty of closeups and medium shots to bring the action alive.

At the top of the six hundred feet of fixed ropes, the camera crew and climbers parted company. The climbers headed on up and Tom and David descended. A third camera crew, Greg Lowe and Rusty Baillie, was already waiting for the climbers in the middle of the face. This camera crew had got itself into position by climbing along a traversing

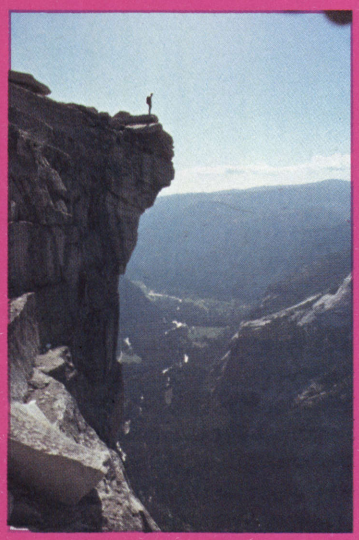


Filming the two climbers, Jim Erickson and Art Higbee, approaching the bottom of the 2,200-foot face of Half Dome. (BELOW) Ecology-minded film star Robert Redford (left) recording the narration for "FREE CLIMB". The editor of the film, Barry Corbet (a member of the American Mt. Everest climbing expedition) at right. Director Robert Godfrey, second from right.





(LEFT) Filming Jim Erickson and Art Higbee at the start of their ascent of Half Dome. (CENTER) Preparing to shoot a sync-sound sequence prior to the climb. (RIGHT) Sync-sound filming from fixed ropes on a practice climb that took place before the filming of the actual ascent of Half Dome. The *cinema verité* approach required that the filming not interfere with the climbing and that the climbers would not be asked to do anything special for the cameras—no retakes, no tricks, no fake falls.



(LEFT) The dramatic summit of Half Dome. (CENTER) A crew member starting down the fixed ropes that dropped 400 feet from the summit of Half Dome to Big Sandy Ledge. In order to keep up with the climbers, the film crew adopted technical climbing techniques for moving up the face, traveling light and fast. Eclair ACL cameras with 200-foot magazines were used for lightness, along with Nagra SN recorders for the more inaccessible situations. (RIGHT) Filming the practice climb.

ledge system that led right into the middle of the face. The timing worked perfectly. Greg and Rusty were able to film the climbers in both closeup and long shot by moving back and forth along the ledge system. They had the Nagra SN with them and were able to shoot sync sound of the climbers stopping for lunch on a tiny ledge, and commenting on dark clouds that promised bad weather. The climbers were in good spirits. At this point they had climbed about a thousand feet up the face. So far all the climbing had gone free. Art had taken a number of short falls in the first six hundred feet, which Tom had been able to film, but he had not been hurt.

With the weather looking threatening, Jim and Art decided to spend the night where they were and Greg and Rusty, satisfied with their footage of the midsection, climbed back along the ledge and off the face.

The next stage of the plan was for both Greg and Tom to hike to the top of Half Dome via the tourist trail up the back of the mountain. Ropes had previously been dropped over the top of the face and snaked down four hundred feet to a sizable ledge called Big Sandy. Greg and Tom were to slide down these ropes using climbers' rappelling technique and be waiting for the climbers on Big Sandy when they arrived. The camera crew would spend the night on the ledge with the climbers, and then jumar back up the fixed ropes next to them on the final day, filming the final four hundred feet to the top—the most difficult and most spectacular section of the climb.

That night, as the two climbers sat it out on their tiny ledge a thousand feet up the face, it snowed six inches! The situation changed dramatically from filming to survival. After a desperate struggle the two climbers were able to climb their way to safety by following the ledge system that the camera crew had used the day before. Despite the awfulness of the conditions, we were able to film the final section of the climbers' escape from the face in the snow in sync sound, and obtained an unplanned but extremely dramatic sequence for the film.

At this point, the climb was temporarily abandoned. It would take many days for the snow to melt and for the rock to dry out and be suitable for free climbing.

Two weeks later the climbers started again, from the bottom. They wanted to free climb Half Dome from ground to summit in one continuous ascent. This time the weather cooperated. The climbers reached Big Sandy ledge, four hundred feet from the top, at the end of the first day. Tom and I were waiting for them with camera and sound gear and were able to shoot sync sound of them settling into their bivouac for the night. I was operating the Nagra 4.2 and, other than the problem of wind noise disrupting sync takes, everything went very smoothly. The ledge was spacious and we were able to work quite comfortably.

Greg and David later came sliding down the ropes from the summit and the next day we filmed the final spectacular four hundred feet. This section proved very demanding for Jim and Art. The free climbing was of absolutely the most extreme difficulty. At more than one place

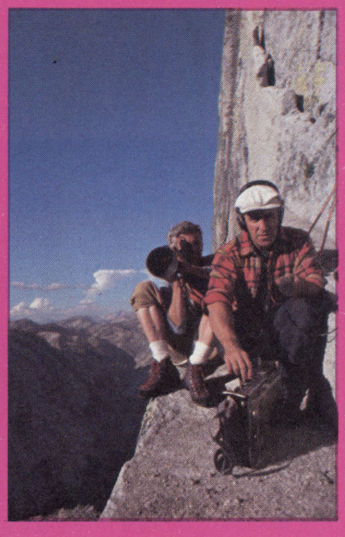
they took a number of short falls before they were able to free climb these sections.

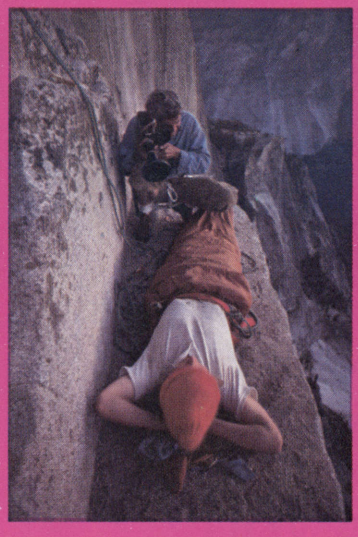
For this last four hundred feet we had two fixed ropes close to the climbers. Tom filmed from a position to the side, and Greg filmed shooting down from a position directly above the climbers. With this configuration, both cameramen were able to shoot simultaneously without getting in each other's way. This provided two different angles of the most exciting action to be intercut into the final film. It sounds simple in this brief description but the reality of filming from those fixed ropes two thousand vertical feet above the ground was something else.

The film ended poignantly. Only a few feet below the summit Jim arrived at a steep slab of smooth rock that, despite his best efforts, he just could not free climb. Exhausted from the rigors of two thousand feet of incredibly difficult free climbing, he had to pull up on his rope to overcome this final few feet. From my

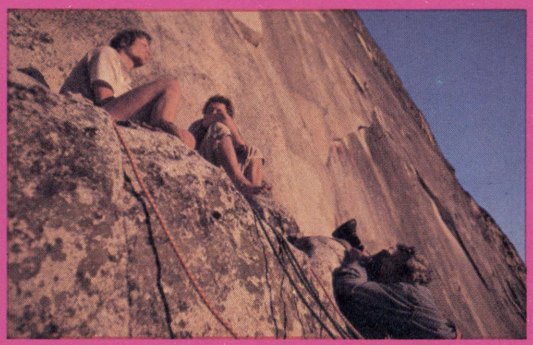
Continued on Page 290

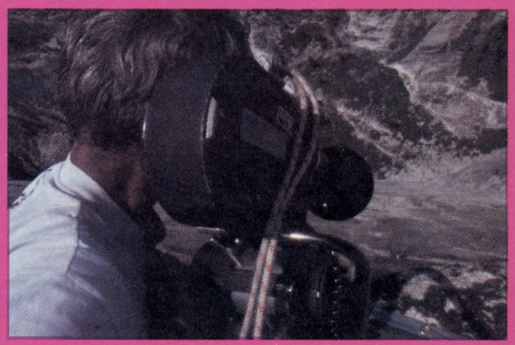
(ABOVE LEFT) The two climbers at the start of their ascent. (RIGHT) Filming a low-angle shot of the climbers. (BELOW LEFT) Tom Frost (camera) and Bob Godfrey (sound) filming a sync-sound sequence of the two climbers settling in to spend the night on Big Sandy Ledge. This ledge is 1,800 feet above the valley floor. (CENTER) Tom Frost filming the climbers "comfortably" settled for the night. (RIGHT) Greg Lowe (camera), David Braeshaers (assistant) and Tom Frost (camera) suspended from 400-foot-long ropes, filming the Zig Zags on the last day of the climb.





(LEFT) Bob Godfrey (cameraman) and Kevin Donald (soundman) filming the sync-sound sequence when the two climbers were inadvertently caught in a snow storm high on the face of Half Dome. (CENTER) Tom Frost filming the climbers on Big Sandy Ledge. (RIGHT) Tom Frost peering over the summing rim of Half Dome to get a shot looking down the full 2,000-foot sweep of the face. The two climbers can be seen on a ridge below. The highly specialized filming crew of ten included top-class filmmakers who were also expert technical climbers.





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"THE NUDE BOMB"
Continued from Page 253

that you favor?

WOLF: Yes. I happen to work at T/4. I leave the lens at that setting and light to it. I tell the lab, "I'm not changing anything. Just give me a print right on the middle of the scale and let me do everything else myself." If there is an effect, I will light for the effect, but the stop will still be T/4. If it's a bright scene, I'll light for it; if it's low-key, I'll light for it—but I don't let them do it. This is the training I got at Technicolor and it's stood me in good stead all these years. As I remember, from my black-and-white days years ago, when I was an assistant, we used to work this way. We'd select one stop, and that would be it all day long. Recently I was supposed to take over a show from a cameraman who was going away for a week's vacation. I came in to observe on Friday, because I was supposed to take over on Monday. I watched them work and for every shot he gave his assistant a different stop. This went on all day long and every scene was shot at a different stop. I don't work that way. I could almost weld the lens at Stop T/4, because I never change it.

QUESTION: There are quite a few effects in THE NUDE BOMB, as I understand it. Did you do them with blue screen, front projection or rear projection?

WOLF: There was one sequence that involved 12 parachutists in free-fall against a falling sky plate that had been made. We wanted to shoot it front projection because we needed that kind of scope for the shot, but we filmed a test and found out that it couldn't be done.

QUESTION: Why not?

WOLF: Well, to begin with, you've got 12 people supposedly suspended in the air. How are you going to do it without wires? Our special effects department devised a special netting which they put up on a framework, and on the front of this they hung a wall of the same 3M reflective material as the screen in back, but this gave us a problem because the 3M material in front was so much closer than the background screen that we got different exposures on the top and bottom halves. Also, it gave us a straight line across, which we tried to break up with a serrated edge, but that didn't work because parts of the parachutists were lost. The sequence finally had to be shot live, with actual skydivers photographed by means of helmet cameras and such. The

intercut close shots of Don Adams were made with him suspended on wires in front of a rear projection screen.

QUESTION: How do you feel about front projection as a composite effects method?

WOLF: Well, I was one of the pioneers of front projection years ago, working with Bill Hansard. I used to shoot his tests for him. The front projection process is a fantastic process—especially for scenes that require a large scope. I remember that when I was photographing THE BEVERLY HILLBILLIES there was one sequence in which Phil Silvers, playing a con man, sells them Central Park and they chop down some trees and proceed to build a log cabin on the edge of the lake. I shot some plates in Central Park near the lake and we brought them back to the studio and built parts of the cabin in front of this plate. It looked like they were actually in Central Park. It was fantastic, because we had the building in the foreground and the whole scope of the lake with people rowing. You can't do that with rear projection. It's impossible. You can't get enough light through the projector.

QUESTION: What about in front projection the problem of balancing your foreground exposure with the brightness of the background plate?

WOLF: I've found that the balance is almost as the eye sees it. That isn't true in rear projection because you have the shutter to contend with, which forces you to lose anywhere from 1/2 to 3/4 of a stop. Your eye doesn't see this; consequently, you have to guess a great deal. In other words, you must let the foreground win, hoping that the background will come up enough for it to balance.

QUESTION: Can't you make a test?

WOLF: You can, but you have to wait until it goes through the lab. I remember that years ago one of the fellows at MGM invented a viewfinder with a shutter in front of it to help him balance the exposure. The shutter causes a loss of exposure to the eye, but not to the film. Commenting on front projection, I would say that its major drawback is that it's almost impossible to get a close shot with the process.

QUESTION: Then what do you do?

WOLF: You use rear projection or blue screen. Blue screen is an excellent process because the composite is made in the optical printer and you have complete control over the balance. ■

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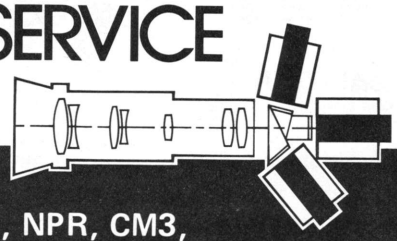

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CREATING "CABBAGES AND KINGS"

By MICHAEL J. McALISTER and TOM LANDRY

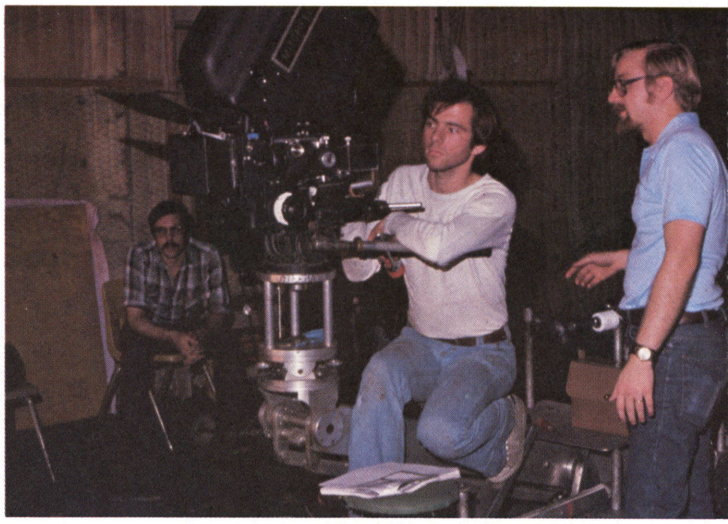
An unusual student fairy tale production features the filming of live action figures silhouetted against painted backgrounds

"If there's one thing all student films have in common," explains writer/director Tim Landry, "it's an extreme lack of money. Usually about the best you can do is pay for your raw stock, processing and equipment. Everything else—actors, props, locations—must be scrounged."

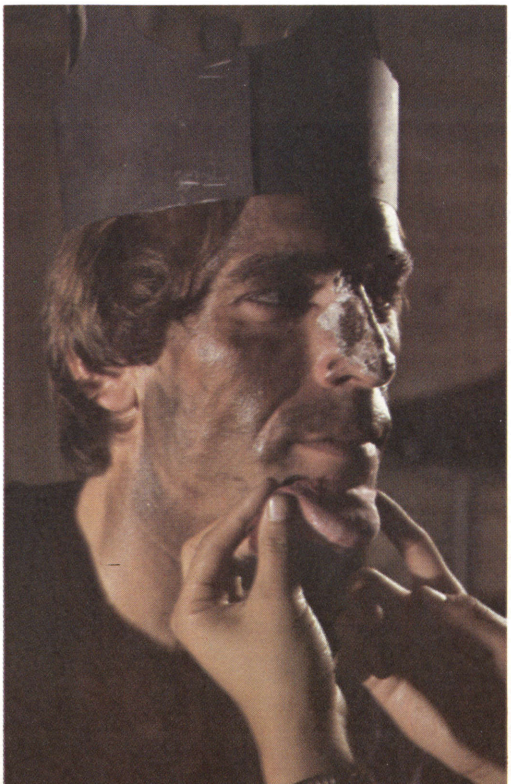
For Tim this was quite discouraging, since he leans very strongly toward fantasy, a *genre* which often requires the creation of totally different worlds. Yet, in spite of the budget limitations, he wanted to make an "unusual" film that had high production value, was fun to watch, and would provide a good learning experience for himself and his crew.

"A few weeks before the semester began," he continues, "I found a delightful Brothers' Grimm fairy tale that I hadn't been familiar with before. It seemed the perfect piece for a student project—it was the proper length for a short film, it had good basic human drama, and it was even public domain. Plus it had just the right amount of whimsy to make it fun. The problem: How to make it on a zero budget when the story called for castles, kings, and pageantry? The thought of combining live actors with painted background plates occurred."

Then Tim remembered some fairy tale films he'd seen done by Lotte Reiniger. She had animated cut-out paper silhouettes against translucent tissue paper backgrounds. "I liked the quaint, Old World quality of these films", he explains, "so I decided to make a Lotte Reiniger-type film, but with a different technique. The film would have silhouetted live actors, combined with painted Disneyesque backgrounds. The result would be the stylization of the visuals—just enough to complement the way a fairy tale abstracts human behavior."



(LEFT) Full view of shooting set-up, showing relationship of cyclorama and raked stage to the camera. (RIGHT) Director Tim Landry and cameraman Mike McAlister discuss details of a shot. (BELOW LEFT) Nuri Ibars as the princess and Gareth McClain as King Ludwig—typical of silhouettes as photographed during live action filming. (CENTER) Nose and chin prosthetics are applied to actor Gareth McClain in order to obtain an unusual facial profile. (RIGHT) The princess and the fiddler walk atop a treadmill used to simulate a trucking shot.



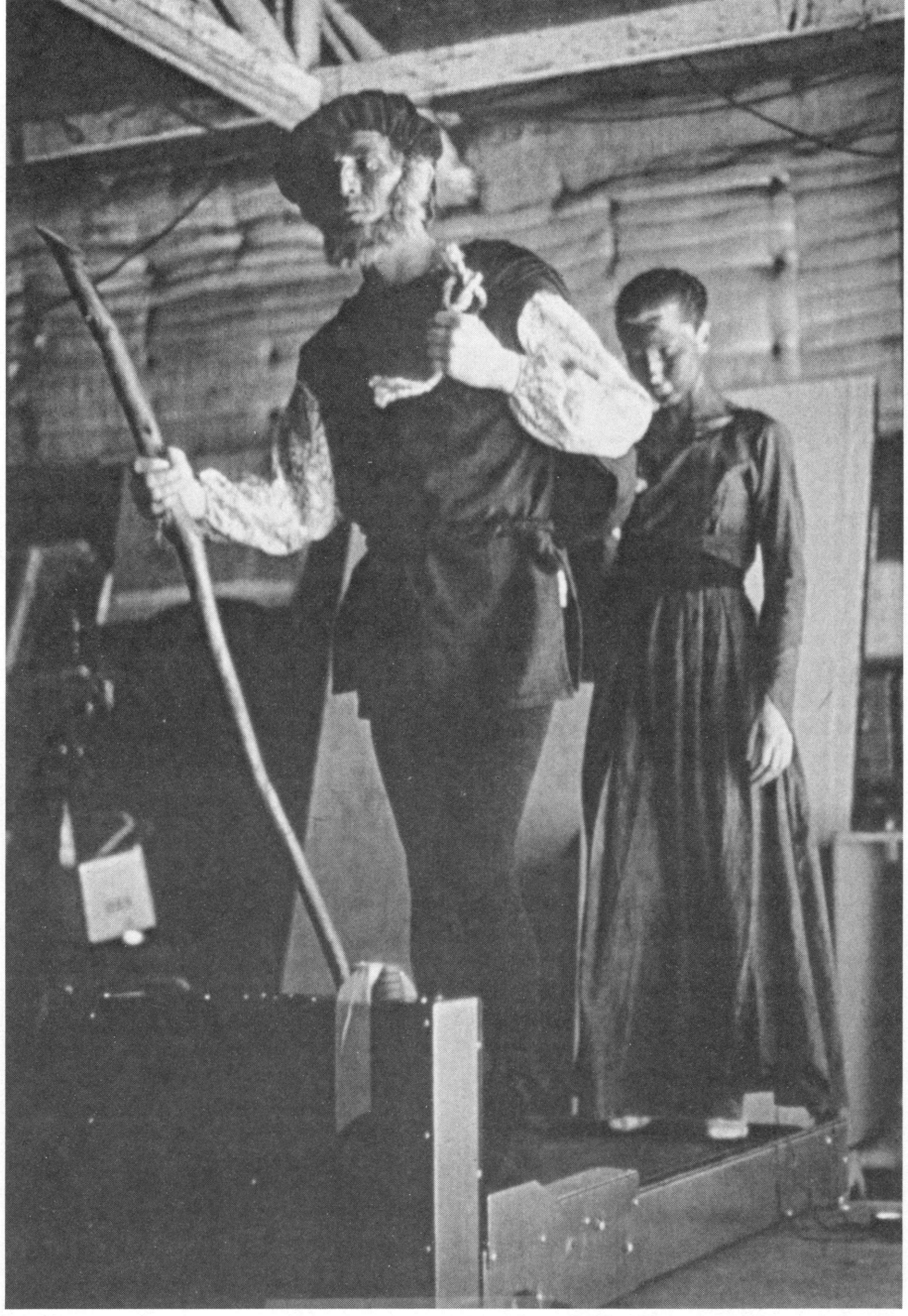
And so the project was born. The script was written and Tim set about assembling the crew. Mike Wood became the Production Manager, Jay Horan joined as Editor, Frank Amsden was to do sound, and I, Mike McAlister, was to be Director of Photography. The crew was prepared for a long semester of hard work, but not one of us thoroughly realized what we were getting into.

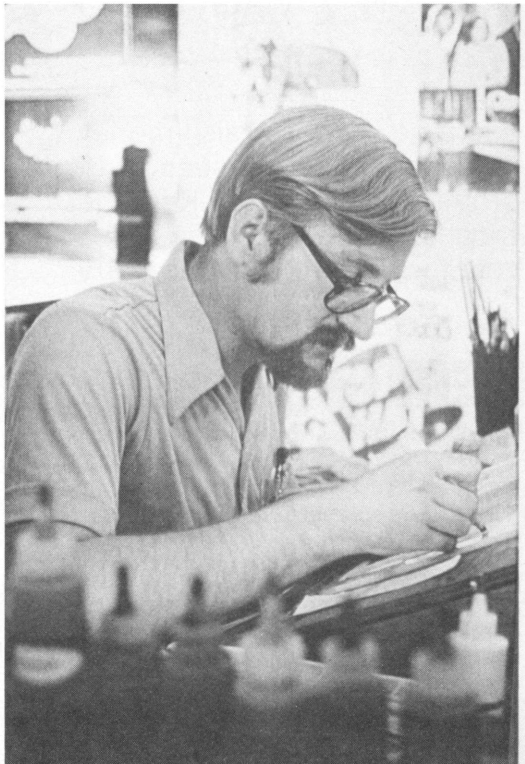
The semester began with an extensive series of photographic tests. We divided the problem of obtaining silhouetted actors on painted backgrounds into three main categories: 1) How to achieve perfectly dense, full-body silhouettes; 2) How to combine the silhouettes with the backgrounds; and 3) How to do it cheaply. Of the three categories, perhaps the third affected our decisions most often.

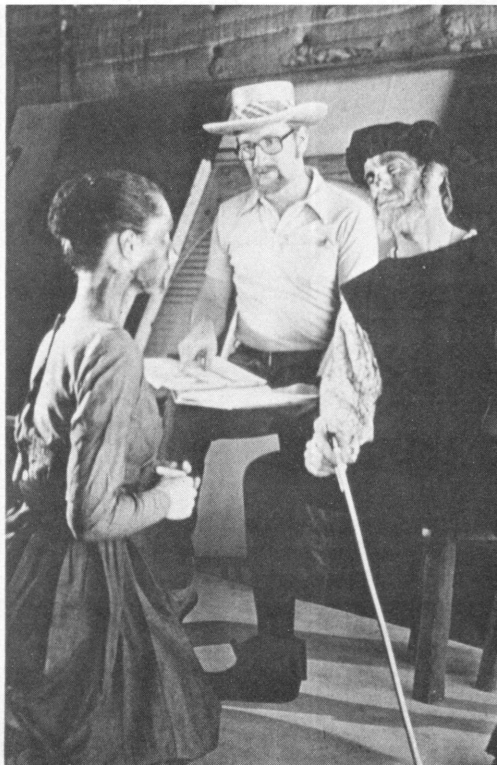
Due to time and logistical considerations, the live action would have to be shot first, which immediately eliminated front and rear screen projection as compositing techniques. Since the compositing was to be some sort of bipacking, either in the optical printer or with raw stock in the animation camera, the original silhouettes had to be perfectly dense with a perfectly clear surround. This, we decided, could be accomplished by shooting unlit actors against some sort of brilliantly lit white background. For ease of operation as well as budgetary considerations, we decided to use conventional film stocks.

We tested various film stocks in various printing combinations—chiefly Plus X Negative and Hi-Contrast Positive (7362). We tried Plus X printed onto Hi-Con and Hi-Con processed as negative and printed onto Hi-Con. The immediate advantage to these combinations of stocks was that the U.S.C. film lab could have handled our entire order at a considerable saving. The results, however, were unacceptable. We would have liked to experiment with the 16mm equivalent of 5369, but as of this writing it does not exist. After some additional research, we discovered that the problems we were having with grain build-up and insufficient contrast could be avoided by processing the Hi-Con camera original as reversal and printing onto Hi-Con which was again processed as reversal. Not only were the images grain-free, but we were also able to retain the benefits of increased contrast with the print. (Another reason for striking a print was to avoid the risk of bipacking with the live action original, a risk which, we later discovered, would have proved fatal to this production.)

Concurrent with the selection of the film stock was the selection of a background screen and lighting arrangement







King Ludwig/Fiddler (Gareth McClain) and benumbed princess (Nuri Ibars) make their way along the treadmill used to simulate a trucking shot. (BELOW LEFT) Writer/director Tim Landry applies final touches to a background painting. (RIGHT) Director Tim Landry discusses scenes with his actors. The U.S.C. student production presented many technical challenges.

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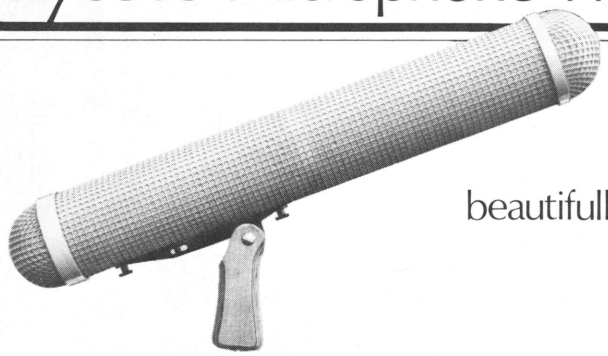

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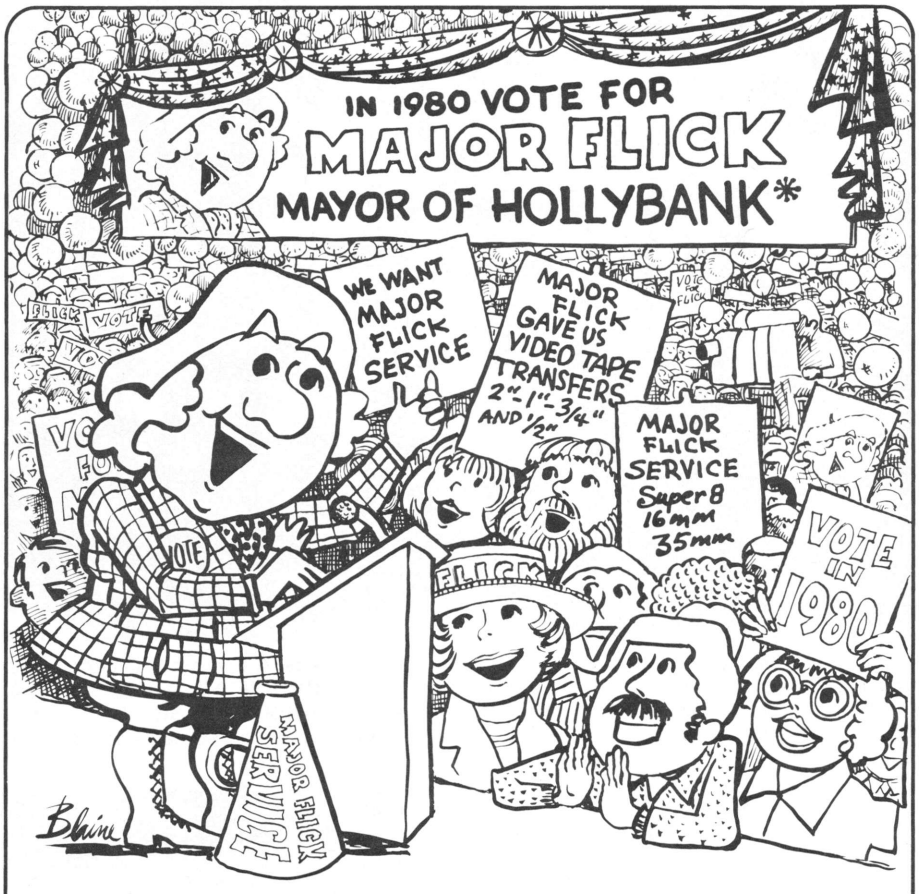
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to be used while filming the live action. We consulted numerous people and came up with as many different methods as there were consultants. The overall consideration was to obtain maximum contrast between actor and background screen. Front projection of white light onto a Scotchlite screen, though likely to yield the best results, was eliminated for reasons of cost and ease of operation. Other screen materials utilizing both front and rear lighting were suggested. What we finally decided upon was a 12′ by 16′ white linen cyclorama suspended in a sloping fashion and lit from both the front and the rear to achieve an even light level of 1250 footcandles. The intense light was necessary because the exposure index of Hi-Con processed as reversal was found to be roughly eight. Even with this high light level we found ourselves shooting with our wide-open aperture of f/2.3.

It was important that the actor's silhouette be perfectly dense, while the surrounding background was perfectly clear. Otherwise, when combined with the painted background, either the characters would appear semi-transparent as the backgrounds bled through them, or the backgrounds would have dark spots in them corresponding to the dark or unlit areas of the cyclorama. The touchiness of this situation becomes apparent when the question of how to obtain feet in silhouette is asked. We discovered that under no circumstances could any portion of the actor's body (such as feet) come in contact with the background screen (or in this case the floor). The reason is obvious when one tries to light the floor without lighting the feet. No arrangement of lights and flags proved successful. It was during an early morning hour of desperation on the U.S.C. sound stage that I discovered the solution. While lying exhausted on the floor I raised my head to take one last look at the brightly lit cyclorama. It was then that I saw a small table standing on the floor before me, with all four of its legs completely silhouetted against white! The answer, I realized, was to shoot each scene as though taken from floor level. Since all our actors would be in silhouette, the odd angle would not be noticeable.

This discovery led to the construction of a stage platform which could be inclined to a variety of angles. After placing the camera the platform could be adjusted slightly higher in front than in the rear, so that the camera "saw" only the edge of the plane of the stage silhouetted against the background screen. This way, anything extending above the plane of the stage (like feet), would be completely visible against white. The angle to

which the stage was inclined depended only upon the subject distance and the height of the camera above the floor. The front edge of the stage was then lit separately from the background and the effect of a silhouetted actor completely surrounded by white was achieved . . . almost. No matter what we tried, a thin line describing the top edge of the stage platform would always appear.

About that time (luckily), it was decided that the original concept of black figures completely surrounded by white was not necessarily the best stylistic way to go. We feared that after being composited with the backgrounds, the figures might appear to float in the scene rather than become a part of it. Lotte Reiniger, in her films, had approached the problem by always placing her characters on a black "platform". In a round-about way we decided that maybe she was right. We kept the raked stage (the concept of the camera being at floor level being a valid one) and refrained from lighting the front of it.

Occasionally we had the need for an extreme long shot. Since our cyclorama was barely tall enough to clear the actors' heads and barely wide enough to include the immediate action, finding a clear background for these shots posed a problem. The solution was a white card, a "garbage matte" of sorts, cut to the proper contour and positioned close to the camera. In this manner the edge of the card, being out of focus, would "feather" into the background producing a seamless extension. Being relatively small, the card could be lit with only one or two light units. Obviously the actors could not move beyond the limits of the "real" backdrop, but this proved to be no problem.

A final element to be considered during the generation of the live action mattes was the costuming. This film posed some unusual problems in that the elegance and detail of a costume could only be defined by its profile. Where costumes were found to be deficient in profile, cardboard and paper attachments were devised. In certain cases, adjustments were made in the profiles of the actors themselves. Beards, chins and noses were added to help make the players more distinguishable from one another. In all cases, the costumes were of black or dark colors, and black makeup was used to reduce the chance of light reflection which would render part of the actor's body transparent in the final silhouette.

The camera used was the school's Mitchell 16, primarily for reasons of registration. It was also the most available, since the lighter Eclairs and Arriflexes are more popular among U.S.C. crews. With its hard lenses and precision

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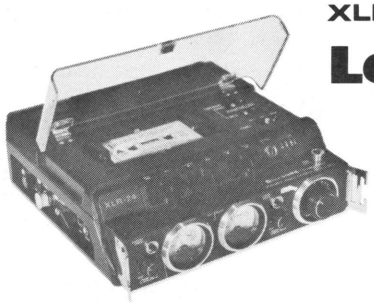

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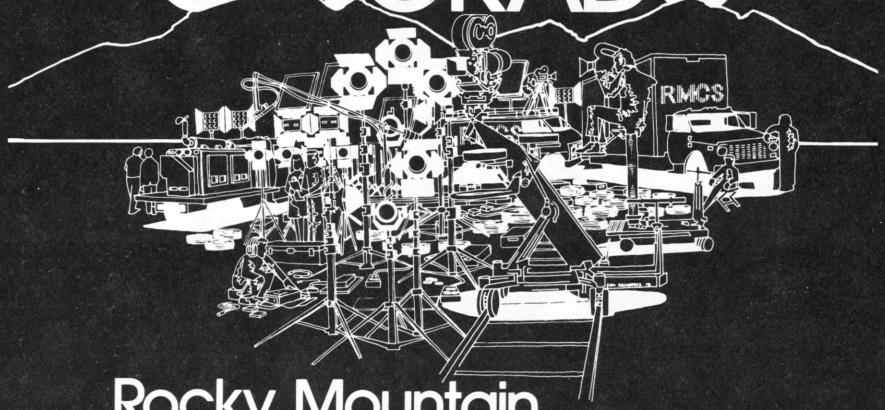

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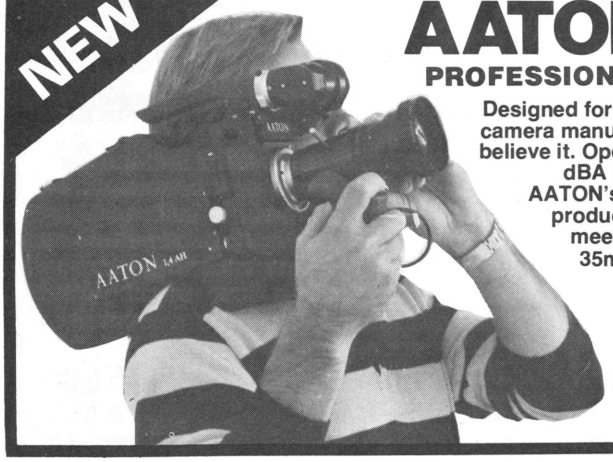

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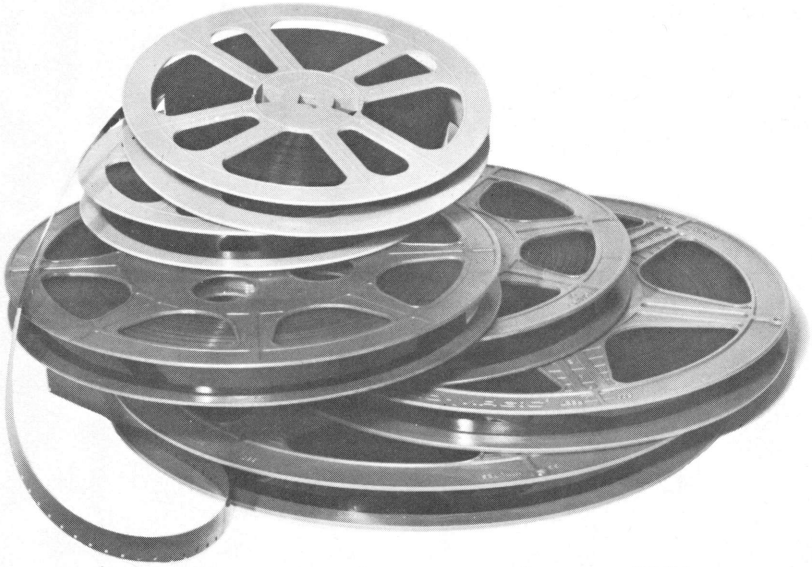

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movement it performed beautifully all the time.

One particular advantage we found in using the Mitchell was the parallax viewfinder. This sounds odd, because reflex finders are usually preferred. But since nearly all of our shots were of a locked-down nature and the action was essentially taking place in one plane, the normal disadvantages of the parallax finder were virtually eliminated. The big advantage was that the finder projects the image being photographed onto a large, brightly lit ground glass. Thus, both operator *and* director can view the scene and the director knows exactly what he is getting. It's almost as good as a video finder.

Due to the lighting requirements of the live action shoot, nearly every lamp on the U.S.C. sound stage was used. Every bit of available power was drawn—a total of 800 amps. Under these circumstances the tiny sound stage quickly became an oven. Dressed in heavy medieval costumes, the actors performed in non-existent settings with an excellence only afforded by professionals. Their cooperation and patience allowed us to work with relative ease, getting most shots in the first or second take. Combined with the advantages of a single lighting setup and a single location, we wrapped the live action in only a few weekends.

So much for the easy stuff. The real work began.

Each shot now needed a background. In order to generate the proper perspective in the background paintings, every shot was rotoscoped for character position. These rotoscoped drawings were then used as a basis for the background layout drawings and finally for the paintings themselves. (While all this was going on, a workprint of the original black and white silhouette footage was being edited, just as normal film would be. The only difference was that the backgrounds weren't in yet. As the shots were completed they were "dropped" into workprint until finally we had a full-color workprint complete with backgrounds.)

Fortunately, since closeups take place in the same "locale" or set as the master scenes, we could often use a small portion of the larger background painting for the background in the closeups. This saved countless hours of having to generate a different background painting for every single shot.

Once the paintings were complete, it was time to combine the elements. As mentioned earlier, the combining process would necessarily involve bipacking, but where? Experience showed that 16mm opticals are inherently bad—the small image just cannot tolerate a second generation. Therefore, if we could avoid the

optical printer and bipack the original silhouette footage with raw stock in the animation camera, we could combine the silhouettes with the backgrounds at the time the backgrounds were being photographed. Not only would this produce a first-generation picture more pleasing to the eye, but it would also save hundreds of feet of film. This, then, was a goal to strive for.

U.S.C. has two animation cameras, a Bowlds-Acme with fixed pin-registration movement and an Oxberry with moving pin-registration movement. Our goal was to get either of them to pass two pieces of film through its gate with a certain degree of reliability. Our first choice was the Bowlds-Acme, due to the possibility of better registration, but the school owned no bipack magazine. Only a very few were ever made, and after a lengthy search we found that those in existence were unavailable for our use. We reluctantly turned our eyes to the Oxberry.

No bipack magazine was necessary for the Oxberry, since it has both internal and external load capabilities which can be utilized simultaneously. Therefore, the takeup system proved to be no problem. The rest of the film transport mechanism proved otherwise. The Oxberry was not too fond of the idea of bipacking. Film would jam in the gate, loops would be lost, etc., etc. We performed many tests and executed many fine adjustments, many of them bordering on superstition. The camera would run thousands of frames with no problems, then suddenly lose its loop for no apparent reason. It would refuse to pass a certain bipacked piece of film during one attempt, and then accept it minutes later. Oxberry servicemen John Huber was summoned to the scene.

Admittedly we were asking the camera to do a lot. The pitch of the Hi-Con was slightly different from that of the color stock, and the thickness of the film to be passed through the gate was obviously doubled. John Huber made what adjustments he could, and suggested ways to relieve the pressure in the gate. The rest, we decided, was a matter of how many times we wanted to repeat the shot, hoping that next time it would work.

One of the most annoying problems in the beginning was that if the camera lost its loop during the shot, we would never know it until it was much too late. The camera has a number of buckle switches, but they are located in such a position as to be tripped only after the film has actually broken. We needed to be signaled at the very first of losing a loop in order to avoid damage to our Hi-Con matte. The system we devised was that of attaching one end of a bent paper clip to a buckle switch, while the second end

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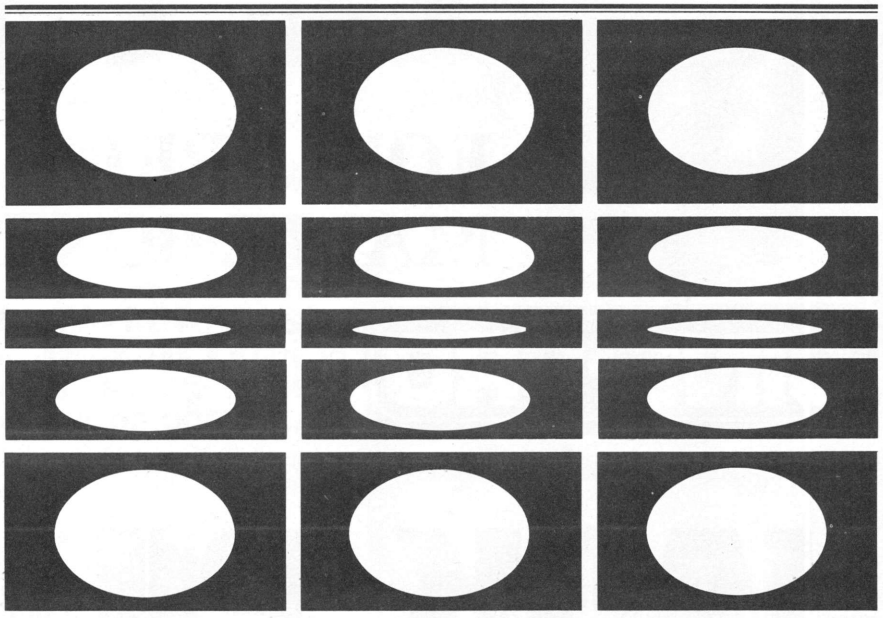

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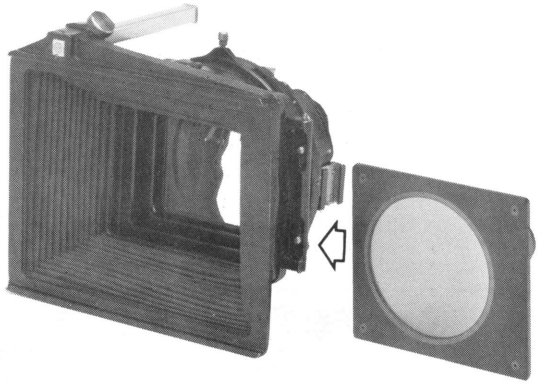

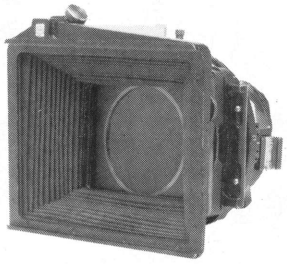

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was bent in such a way as to have a "finger" extending into the loop. If the loop size shrank by even one frame, it would touch the paper clip and, by lever action, trip the buckle switch. It was a relatively simple Rube Goldberg type of solution, but it saved many wasted man-hours and the bother and expense of having to regenerate the silhouette footage.

Another major problem, to which we found no convenient solution, was that the Oxberry could not be trusted to run in reverse while under bipack stresses. Since many shots had "burn in" elements that needed to be added on a second or third pass, it proved necessary to unthread the camera and rewind the silhouette plate outside, while the raw stock containing the latent image of the first pass was rewound inside the camera. This required the loading and unloading of the camera as many as three times per shot.

The piece of film used as the silhouette plate during the bipack operation was a reversal print of the live action camera original. This print had to be registered in order to prevent printer weave from causing the foreground silhouettes to "jiggle" against the backgrounds. Unfortunately, there are no registration contact printers in 16mm, so the best we could do was to generate the required prints on the school's old Producer's Service model 104 optical printer. The printer promptly broke down and stalled production for over two months.

The printer was finally repaired and the prints were made. Its service was invaluable, but did not fully solve the problem of image jiggle: there seems to be a degree of imprecision inherent in 16mm. The major problem with imprecise registration was with the inanimate set pieces from the original silhouette photography (such as tables). Any movement, however slight, would prove distracting. With moving actors as subject matter the image jiggle is barely noticeable to even the knowing eye.

Realizing that we probably had done everything possible to eliminate the mechanical causes of image jiggle, Director Tim Landry discovered another solution. For those set pieces that were sufficiently distracting, a frame was rotoscoped showing the set piece's size and position relative to the background. An oversized version of the set piece was then painted on a cell and laid over the background during composite photography. The net effect was that the set piece on the silhouette plate could jiggle inside the set piece on the background overlay. Since both set pieces were black, only the larger, registered version would be apparent to the film being exposed. The

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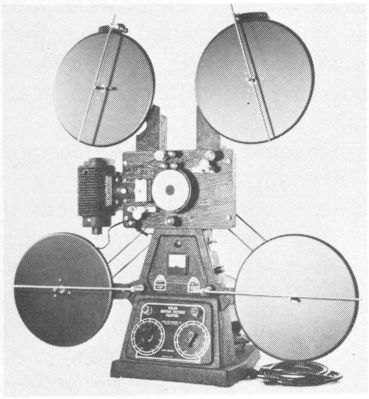

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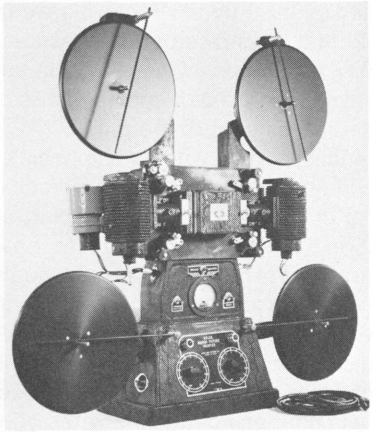

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Using the same method of adding or replacing objects in the live action silhouettes, we were able to add props or set pieces which were too difficult to obtain during the live action photography. We were even able to add animated quasi-human characters and animated animals.

There are a few sequences of special interest in the film, one of which has a runaway horse galloping through a village market place. Needless to say, the scene would have been impossible to shoot on our small stage. For this one scene we photographed a normal daytime exterior of a horse and rider, later rotoscoping each frame of the shot taking care to remove the rider. The images of the horse were then painted black and laid over the backgrounds as described above. When combined with the live action images of people running, proper editing and a complete sound track, the total effect is quite impressive.

The final scene in the film involves a ballroom filled with dancers. I've already mentioned the cramped facilities in which the live action was shot—hardly a grand ballroom, and certainly unable to accommodate the necessary number of dancers, even if they could be cast and costumed. The solution was simple, though its execution was not. We photographed between two and six dancers at a time, then multiplied them later by repeating their images in different parts of the frame using the optical printer.

As is the case in most special effects photography, most of our shots were of a locked-down nature. Since I could not adjust my compositions for the movements of the actors, the actor's movements had to be confined to the boundaries of the frame. This tended to lend an overall static feeling to many of the images and the frame began to resemble a real proscenium. Though we were forced into this situation by the nature of the project, we were unwilling to allow the film to appear flat or static. There are quite a few camera moves in the film—dollies, booms, trucks etc., each requiring its own specialized devices. A treadmill allowed us to simulate a truck, a multiplane unit was used on the Oxberry quite a bit, and other traditional animation devices were used to simulate depth whenever appropriate. The simplest of these was merely shooting the backgrounds of closeups out of focus. The bipacked silhouette plate remained in focus and the feeling you get is the overall effect of a normal interior closeup taken with a long lens.

The production of CABBAGES AND KINGS was surely an example of Murphy's Law taking its toll. We suffered

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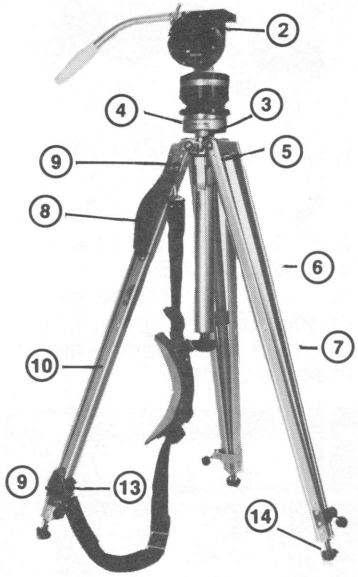

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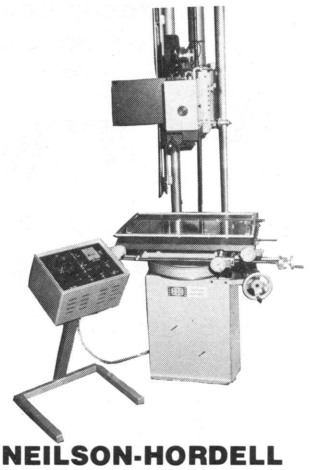

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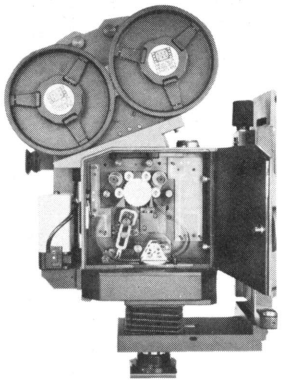

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countless delays due to equipment malfunctions and unwelcome surprises. The quality we wanted was quite elusive, but with each successful scene came the desire to try the unsuccessful shots just one more time.

Nothing came easily. Each shot had to pass through some type of camera at least three times before reaching the screen—often five or six. Even then we were rarely able to successfully composite a shot on the first attempt. The conditions under which we worked were crude, and at times we pushed 16mm technology to the limit. As a result we all learned a lot about the filmic medium and our craft.

We premiered the film on December 15, 1978, nearly a year after its conception. The lights dimmed, the curtain opened, and the audience was guided into the lives of three storybook characters. But we, the crew, tensed as we saw every mistake, every blemish, and every imperfection we had been forced to accept. But we also relaxed, for we were watching a completed film that had been nothing more than a creative impulse only a year before. ■

FILMING "FREE CLIMB"
Continued from Page 279

perspective as film director, I was not displeased by this turn of events. It gave an ending that possessed humanness and humility and in no way negated Jim and Art's magnificent free climbing efforts on ninety-nine percent of the face.

The finished film with its emphasis on Jim and Art as people, and the incredible natural drama of their free climbing efforts on Half Dome, seems to have achieved two of my major personal goals. On the one hand, it respects the integrity of the climbers' efforts as dedicated individuals. At the same time, it is accessible and of interest to non-climbing audiences without cheapening the film by resorting to tricks or fake action. The film has won four major festival prizes in recent months (American Film Festival in New York, Miami International Film Festival, Denver International Film Festival, and the Banff Outdoor Film Festival in Canada), and actually seems to work better with non-climbing audiences. Robert Redford agreed to narrate the film, based on his viewing of a rough cut, and we felt complimented by his involvement.

FREE CLIMB represents the successful outcome of a commitment to the concept of a mountaineering film that avoids the traditional traps of being hoaky or boring. The *cinema verité* approach paid off and the gamble of tying the outcome of the film to the outcome of an "impossible" climb proved fully justified. ■

A.F.I. SEMINAR WITH WISE AND KRASNER
Continued from Page 274

after a couple or three years, got to be an editor and edited quite a number of films at RKO, half a dozen or so. Two of the most famous of those were CITIZEN KANE and THE MAGNIFICENT AMBERSONS for Orson Welles. By this time I had gotten the directing bug and decided I wanted to direct. I had done a little directing, second unit stuff. I was editing and a couple of times I directed added scenes for AMBERSONS. I did new scenes for FALLEN SPARROW, when Dick Wallace, the director, was unavailable. I was editing a little horror film for Val Lewton who did THE CAT PEOPLE and I WALKED WITH A ZOMBIE. He was marvelous with psychological horror films in the '40s. I was editing THE CURSE OF THE CAT PEOPLE, and the director, whose first feature it was, got woefully behind schedule and they couldn't speed him up. So I was called over to the restaurant at noon on a Saturday by Sid Rogell who was running the "B" unit, and he and Mr. Lewton wanted me to take over direction on Monday morning. It was that simple. I felt badly about it because I was working with this director. In fact I was scheduled to work with him that night on the stage. I expressed my reluctance only because of that to Sid Rogell who said, "Listen, there's going to be another director on that stage Monday morning. Now it's either going to be you or somebody else. What do you want to do?" So I took over. My biggest problem of course was taking those actors and learning how to deal with them instead of working with them in captivity, so to speak, on my Moviola.

HOWARD SCHWARTZ: You were an ideal choice to come in on a thing like that because you were so familiar with the film.

ROBERT WISE: Yes, I knew the film and I knew all the people, so gradually it all worked out. But the biggest challenge I had was dealing with the actors and learning how to handle them, how to get a performance out of them and make it all come together. I never had any acting experience myself. When I was in school, the only connection I had with the theater and the plays was always backstage as a stage manager. I was never up front. So when I talk to kids at the universities today I say, "If you want to be a director, take some acting classes. Learn how it is on the other side of the camera. You don't have to be an

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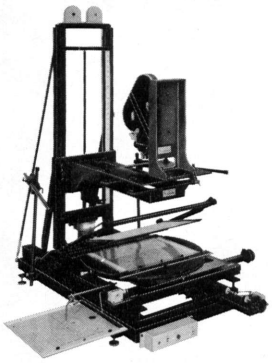

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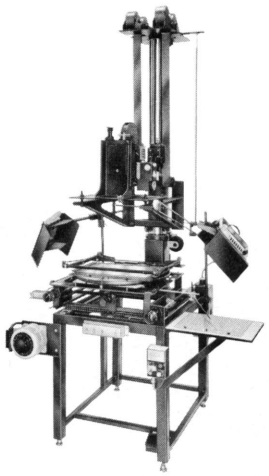

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actor, but find out what the process is, what goes on. Find out what goes on within the actor. It can only do you a lot of good as a director to have had that experience. I didn't have it and I felt the lack of it."

HOWARD SCHWARTZ: Do you remember who the cameraman was on that first picture?

ROBERT WISE: Nick Musaraca. He also did a marvelous job on BLOOD ON THE MOON. I was back in New York a few weeks ago at an RKO retrospective. They ran a couple of my films one night and one of them was BLOOD ON THE MOON, which was just ahead of THE SET-UP in '48. They had borrowed a really good 35mm print. It wasn't washed out, the blacks were black and I was so impressed.

QUESTION: Mr. Krasner, I read that you specialized in anamorphic photography. How did you come into getting into that? What problems did you have?

MILTON KRASNER: Zanuck brought it in from Europe. I did the second picture with the anamorphic lens, THE GLADIATOR with Mature.

ROBERT WISE: What kind of adjustments did you have to make in working with the anamorphic compared to the flat lens?

MILTON KRASNER: Well there was a little change in handling the lens and the people.

QUESTION: Did you have a great variety of lenses when they started?

MILTON KRASNER: One lens.

ROBERT WISE: Zanuck's idea was that CinemaScope was going to be a great time and money-saver for films. I was at Warner Brothers preparing a film when he gave his first demonstration at Fox. Anybody who had worked at Fox was invited over to see this demonstration. He had in mind to simply shoot everything right out in front. You had a three-page scene with five actors and you'd stage it and your camera would be there and that would be all, no coverage, no alternate angles, nothing. You would just shoot the next sequence and go to the next one. He thought you could make pictures in 10 or 12 days. This was at the time when the impact of television on the box office began to be noticeably felt. Everybody was getting desperate

to find something to combat TV with. "How are we going to get our costs down?" This was a tool primarily intended to get the cost down but it didn't work out that way. I did HELEN OF TROY about two years later in CinemaScope and I decided to treat it just like I would any of my films, using over the shoulders, close-ups, everything I could. I shot it in a traditional form in terms of coverage.

MILTON KRASNER: There was a problem with distortion in the faces in those days.

HOWARD SCHWARTZ: Then Panavision came along and there was a development to improve the lenses.

ROBERT WISE: Anamorphic is still lousy in terms of depth-of-field. I just went through it with STAR TREK. I had Dick Kline photographing it and I had worked with him before on ANDROMEDA STRAIN. When we wanted to get a strong face in the foreground and something sharp in back, we had to use diopters constantly to get that because the natural depth-of-field is so terrible in anamorphic. Of course if you use diopters, you're locked off, your people can't cross or do anything like that, but if you get certain kinds of set-ups and the scene is playing, we used it successfully.

MILTON KRASNER: I think Cinerama is the toughest. I did HOW THE WEST WAS WON in Cinerama.

HOWARD SCHWARTZ: One of the reasons that Fox came out with CinemaScope at that time, besides Zanuck's idea of shooting it like a stage play and saving money, was the fact that 3-D was a big thing at that time. Everybody was thinking, "Oh, this is it!" Fox wasn't ready for 3-D, they had been playing with CinemaScope for awhile having brought it over from France where they had somebody working on it. Sol Halprin had worked with the guys and they brought it out at that time. As Bob says, it was also an answer to television with the big wide picture. The interesting thing though is that now there seems to be more money being made than ever before in motion pictures. There are fewer pictures, but they're bigger pictures, and television has more than replaced the "B" pictures that were made. There's more film being shot per day than there ever was, in spite of what you hear about tape.

QUESTION: How has the atmosphere on the set and such changed over the

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years with the accent on blockbuster pictures and high finance? Is there any more pressure?

ROBERT WISE: I don't feel a tremendous difference on the set. I think it's pretty much the same. Our pictures have gotten longer over the years. For some reason or another we're taking longer to develop our stories. What you do feel is the relationship with the companies and the front office and that kind of thing. There is pressure there. I'm in a bit of a situation like that now with STAR TREK because they've already booked the picture, sold it for Christmas and have $20,000,000 in guarantees in. We've got so much work to do to get that picture out for Christmas that it's unimaginable. It's a terribly expensive film and the company wants to make sure that they don't miss that deadline because it means a lot of money to them, to all of us. It's interesting. I grew up at RKO. I was in the editing department for 10 years and I became a director and directed for five years before I left RKO. I came in in '33 and left in '49. I had never worked any place else. After I escaped from RKO, Fox signed me for three years. It was my first step into another studio and I was a little afraid of what it was going to be like. I was used to RKO, which was a major, but a small sort of family studio. I found through the years working at Fox, Warners and MGM that the one common denominator was working on the sets at all of the various studios. What changes is the front office and administration. They all operate differently with different personalities and policies.

HOWARD SCHWARTZ: I think the pressure on the set is more common in television where they only have limited money from the networks that they're going to get for the picture and they have a group that's always cracking the whip to try and get them done in a certain number of days. Even if it's a wonderful picture, they're still not going to get any more money for it.

ROBERT WISE: There are terrible stories about what goes on on the television sets sometimes. But there still are a lot of small pictures being made, thank God. Still, that pressure is put on them to speed things up.

MILTON KRASNER: Even when I did THREE COINS IN THE FOUNTAIN, if it wasn't for Sid Rogell, we'd never have gone to Italy to shoot it. He said, "Go back there and do the picture." Well, we had a lot of money tied up in Italy at the time.

HOWARD SCHWARTZ: Frozen funds.

MILTON KRASNER: Yes, and he said to use the money. He said we could make it cheaper there than we could here. It was made for $1.1 million.

QUESTION: When you work out of continuity with actors in a scene, how do you handle their emotional continuity? How do you build them up to it?

ROBERT WISE: Well, you work that into the rehearsal. When you do rehearse you talk about where you are in the story, where the sequence takes place and what the character is and so on. Actors are pretty conscious of it. They look at the script and schedule and know where they are, but you just remind them where you are in the story and what the scene is about, what led up to it and what you expect out of it. If I'm doing something very emotional in the middle of the scene and shooting it in a close shot, I very often will have the actor start back considerably in the dialogue and take a late start on the camera to save film. One of the things you have to remember—and it's difficult for actors and particularly stage actors and even I have to remind myself of all this all the time—is that there is a tempo for the overall picture and a tempo for a particular scene. It's very easy to play a given scene for its own value, play it for the fullest, in terms of the actors and performance, only to find that in its place in reel five, that it may be a little slow. Rarely do you find yourself saying, "Gee, I wish I played it slower." It's always the other way. Dick Wallace, an old-time director, once told me, "Bobby, I've only got one piece of advice to give you. If it seems a little slow on the set, it will be twice as slow in the projection room." And he's so right. But that matter of tempo within a given scene is very hard for actors to grasp and understand. Sometimes I'll just say to do it again and pick the tempo up a little bit, not to lose the beats or to lose the value, but to just take 10 per cent off of it in tempo. It sounds mechanical I know, but it does work.

HOWARD SCHWARTZ: Any more questions? Well, thank you Bob and Milt. ■

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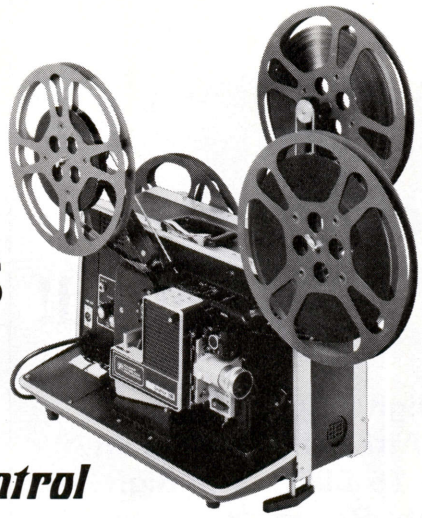

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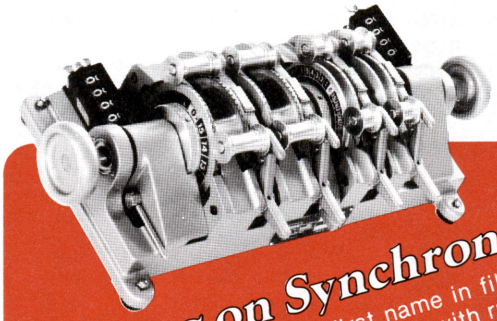

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ALAN LADD, JR.: President, The Ladd Company. Former President, 20th Century-Fox. Responsible for STAR WARS; SILVER STREAK; THE OMEN; SILENT MOVIE; DAMIEN: OMEN II; JULIA; TURNING POINT; NORMA RAE; BREAKING AWAY. Independently produced nine films in four years; began career as agent at Creative Management Agency.

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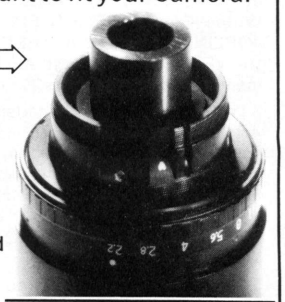

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Continued from Page 274

after a couple or three years, got to be an editor and edited quite a number of films at RKO, half a dozen or so. Two of the most famous of those were CITIZEN KANE and THE MAGNIFICENT AMBERSONS for Orson Welles. By this time I had gotten the directing bug and decided I wanted to direct. I had done a little directing, second unit stuff. I was editing and a couple of times I directed added scenes for AMBERSONS. I did new scenes for FALLEN SPARROW, when Dick Wallace, the director, was unavailable. I was editing a little horror film for Val Lewton who did THE CAT PEOPLE and I WALKED WITH A ZOMBIE. He was marvelous with psychological horror films in the '40s. I was editing THE CURSE OF THE CAT PEOPLE, and the director, whose first feature it was, got woefully behind schedule and they couldn't speed him up. So I was called over to the restaurant at noon on a Saturday by Sid Rogell who was running the "B" unit, and he and Mr. Lewton wanted me to take over direction on Monday morning. It was that simple. I felt badly about it because I was working with this director. In fact I was scheduled to work with him that night on the stage. I expressed my reluctance only because of that to Sid Rogell who said, "Listen, there's going to be another director on that stage Monday morning. Now it's either going to be you or somebody else. What do you want to do?" So I took over. My biggest problem of course was taking those actors and learning how to deal with them instead of working with them in captivity, so to speak, on my Moviola.

HOWARD SCHWARTZ: You were an ideal choice to come in on a thing like that because you were so familiar with the film.

ROBERT WISE: Yes, I knew the film and I knew all the people, so gradually it all worked out. But the biggest challenge I had was dealing with the actors and learning how to handle them, how to get a performance out of them and make it all come together. I never had any acting experience myself. When I was in school, the only connection I had with the theater and the plays was always backstage as a stage manager. I was never up front. So when I talk to kids at the universities today I say, "If you want to be a director, take some acting classes. Learn how it is on the other side of the camera. You don't have to be an

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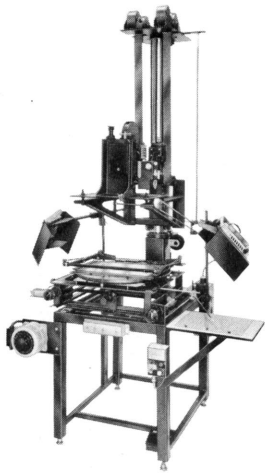

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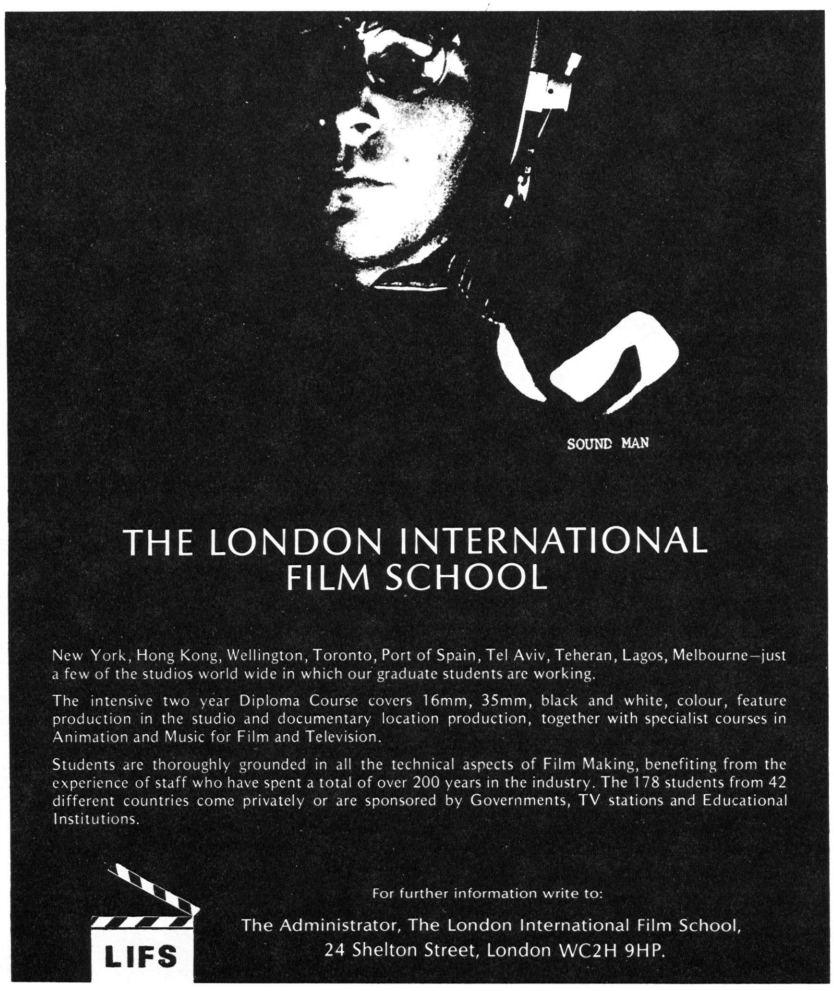
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actor, but find out what the process is, what goes on. Find out what goes on within the actor. It can only do you a lot of good as a director to have had that experience. I didn't have it and I felt the lack of it."

HOWARD SCHWARTZ: Do you remember who the cameraman was on that first picture?

ROBERT WISE: Nick Musaraca. He also did a marvelous job on BLOOD ON THE MOON. I was back in New York a few weeks ago at an RKO retrospective. They ran a couple of my films one night and one of them was BLOOD ON THE MOON, which was just ahead of THE SET-UP in '48. They had borrowed a really good 35mm print. It wasn't washed out, the blacks were black and I was so impressed.

QUESTION: Mr. Krasner, I read that you specialized in anamorphic photography. How did you come into getting into that? What problems did you have?

MILTON KRASNER: Zanuck brought it in from Europe. I did the second picture with the anamorphic lens, THE GLADIATOR with Mature.

ROBERT WISE: What kind of adjustments did you have to make in working with the anamorphic compared to the flat lens?

MILTON KRASNER: Well there was a little change in handling the lens and the people.

QUESTION: Did you have a great variety of lenses when they started?

MILTON KRASNER: One lens.

ROBERT WISE: Zanuck's idea was that CinemaScope was going to be a great time and money-saver for films. I was at Warner Brothers preparing a film when he gave his first demonstration at Fox. Anybody who had worked at Fox was invited over to see this demonstration. He had in mind to simply shoot everything right out in front. You had a three-page scene with five actors and you'd stage it and your camera would be there and that would be all, no coverage, no alternate angles, nothing. You would just shoot the next sequence and go to the next one. He thought you could make pictures in 10 or 12 days. This was at the time when the impact of television on the box office began to be noticeably felt. Everybody was getting desperate

to find something to combat TV with. "How are we going to get our costs down?" This was a tool primarily intended to get the cost down but it didn't work out that way. I did HELEN OF TROY about two years later in CinemaScope and I decided to treat it just like I would any of my films, using over the shoulders, close-ups, everything I could. I shot it in a traditional form in terms of coverage.

MILTON KRASNER: There was a problem with distortion in the faces in those days.

HOWARD SCHWARTZ: Then Panavision came along and there was a development to improve the lenses.

ROBERT WISE: Anamorphic is still lousy in terms of depth-of-field. I just went through it with STAR TREK. I had Dick Kline photographing it and I had worked with him before on ANDROMEDA STRAIN. When we wanted to get a strong face in the foreground and something sharp in back, we had to use diopters constantly to get that because the natural depth-of-field is so terrible in anamorphic. Of course if you use diopters, you're locked off, your people can't cross or do anything like that, but if you get certain kinds of set-ups and the scene is playing, we used it successfully.

MILTON KRASNER: I think Cinerama is the toughest. I did HOW THE WEST WAS WON in Cinerama.

HOWARD SCHWARTZ: One of the reasons that Fox came out with CinemaScope at that time, besides Zanuck's idea of shooting it like a stage play and saving money, was the fact that 3-D was a big thing at that time. Everybody was thinking, "Oh, this is it!" Fox wasn't ready for 3-D, they had been playing with CinemaScope for awhile having brought it over from France where they had somebody working on it. Sol Halprin had worked with the guys and they brought it out at that time. As Bob says, it was also an answer to television with the big wide picture. The interesting thing though is that now there seems to be more money being made than ever before in motion pictures. There are fewer pictures, but they're bigger pictures, and television has more than replaced the "B" pictures that were made. There's more film being shot per day than there ever was, in spite of what you hear about tape.

QUESTION: How has the atmosphere on the set and such changed over the

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years with the accent on blockbuster pictures and high finance? Is there any more pressure?

ROBERT WISE: I don't feel a tremendous difference on the set. I think it's pretty much the same. Our pictures have gotten longer over the years. For some reason or another we're taking longer to develop our stories. What you do feel is the relationship with the companies and the front office and that kind of thing. There is pressure there. I'm in a bit of a situation like that now with STAR TREK because they've already booked the picture, sold it for Christmas and have $20,000,000 in guarantees in. We've got so much work to do to get that picture out for Christmas that it's unimaginable. It's a terribly expensive film and the company wants to make sure that they don't miss that deadline because it means a lot of money to them, to all of us. It's interesting. I grew up at RKO. I was in the editing department for 10 years and I became a director and directed for five years before I left RKO. I came in in '33 and left in '49. I had never worked any place else. After I escaped from RKO, Fox signed me for three years. It was my first step into another studio and I was a little afraid of what it was going to be like. I was used to RKO, which was a major, but a small sort of family studio. I found through the years working at Fox, Warners and MGM that the one common denominator was working on the sets at all of the various studios. What changes is the front office and administration. They all operate differently with different personalities and policies.

HOWARD SCHWARTZ: I think the pressure on the set is more common in television where they only have limited money from the networks that they're going to get for the picture and they have a group that's always cracking the whip to try and get them done in a certain number of days. Even if it's a wonderful picture, they're still not going to get any more money for it.

ROBERT WISE: There are terrible stories about what goes on on the television sets sometimes. But there still are a lot of small pictures being made, thank God. Still, that pressure is put on them to speed things up.

MILTON KRASNER: Even when I did THREE COINS IN THE FOUNTAIN, if it wasn't for Sid Rogell, we'd never have gone to Italy to shoot it. He said, "Go back there and do the picture." Well, we had a lot of money tied up in Italy at the time.

HOWARD SCHWARTZ: Frozen funds.

MILTON KRASNER: Yes, and he said to use the money. He said we could make it cheaper there than we could here. It was made for $1.1 million.

QUESTION: When you work out of continuity with actors in a scene, how do you handle their emotional continuity? How do you build them up to it?

ROBERT WISE: Well, you work that into the rehearsal. When you do rehearse you talk about where you are in the story, where the sequence takes place and what the character is and so on. Actors are pretty conscious of it. They look at the script and schedule and know where they are, but you just remind them where you are in the story and what the scene is about, what led up to it and what you expect out of it. If I'm doing something very emotional in the middle of the scene and shooting it in a close shot, I very often will have the actor start back considerably in the dialogue and take a late start on the camera to save film. One of the things you have to remember—and it's difficult for actors and particularly stage actors and even I have to remind myself of all this all the time—is that there is a tempo for the overall picture and a tempo for a particular scene. It's very easy to play a given scene for its own value, play it for the fullest, in terms of the actors and performance, only to find that in its place in reel five, that it may be a little slow. Rarely do you find yourself saying, "Gee, I wish I played it slower." It's always the other way. Dick Wallace, an old-time director, once told me, "Bobby, I've only got one piece of advice to give you. If it seems a little slow on the set, it will be twice as slow in the projection room." And he's so right. But that matter of tempo within a given scene is very hard for actors to grasp and understand. Sometimes I'll just say to do it again and pick the tempo up a little bit, not to lose the beats or to lose the value, but to just take 10 per cent off of it in tempo. It sounds mechanical I know, but it does work.

HOWARD SCHWARTZ: Any more questions? Well, thank you Bob and Milt. ■

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Stanco 16mm Electric splicer	125.00
Hollywood Tape splicer, 16mm	115.00
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Recording

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Magnasync 602, rack mount, 16mm, A-1	1,595.00
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Mitchell 220V, 3 ph sync, case	$ 99.50
Mitchell BNC, Sync	350.00

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FILMEX 80 KICK-OFF

Continued from Page 261

C.I.A., in Iran and elsewhere.

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Foreign language films screened at Filmex will be shown in the original language with English sub-titles.

The Los Angeles International Film Exposition is the world's largest publicly attended film event. The non-competitive 17-day festival is presented by the Filmex Society in association with The City of Los Angeles, and with the cooperation of the Academy of Motion Picture Arts and Sciences, The American Film Institute, The Los Angeles County Museum of Art, Art Center College of Design, and The UCLA Film Archives. ■

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GARY ABRAHAMS: Director of Corporate Relations, Marble Arch Prod. Instrumental in the development of Filmex, as co-founder and Associate Director, 1971—1978. Involved in motion picture and television production and promotion. Associate Producer for "The Movies," a four hour history of American Motion Pictures for ABC-TV.

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ROB COHEN: Independent Motion Picture Producer/Director. Former Executive Vice President of Motown Productions, where he produced: THE WIZ; MAHOGANY; THANK GOD IT'S FRIDAY; ALMOST SUMMER; THE BINGO LONG TRAVELING ALL STARS AND MOTOR KINGS; SCOTT JOPLIN. Just completed directing A SMALL CIRCLE OF FRIENDS for United Artists.

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PETER GUBER: Chairman of the Board, Casablanca Record and FilmWorks. As independent producer, THE DEEP. Casablanca FilmWorks productions include: THANK GOD, IT'S FRIDAY, MIDNIGHT EXPRESS, AGATHA, FRENCH POSTCARDS and HOLLYWOOD KNIGHTS. Films presently in production KING OF THE MOUNTAIN and for ABC-TV, THE DESCENT. Member of the faculty of UCLA in Theatre Arts for past five years.

ROBERT K. HAGEL: Independent producer; President, Canary Productions, Inc. Member—Mayor's Film Commission and Board of Trustees of the Motion Picture/Television Fund; Los Angeles Film Commission; Vice Chairman, California Film Development Committee; Board of Trustees, Bilingual Foundation of the Arts. Formerly President, Chief Executive, The Burbank Studios; Vice President, Facilities and Operations Division, Columbia Pictures.

JEREMY PAUL KAGAN: Filmmaker/Director/Writer. Films: THE BIG FIX; HEROES; SCOTT JOPLIN; Television: KATHERINE; JUDGE DEE; UNWED FATHER. First AFI Fellow to become member of The Directors Guild.

FAY KANIN: President, Academy of Motion Picture Arts and Sciences. Writer-Producer for motion pictures, stage and television. Recent television credits include the Emmy award winning dramas FRIENDLY FIRE, HUSTLING and TELL ME WHERE IT HURTS. Partner in Kanin-Gallo Productions with first feature LETTING GO set with Marble Arch Productions.

GLORIA KATZ: Writer/Producer, screenwriting team with husband Willard Huyck. Films: AMERICAN GRAFFITI; LUCKY LADY; FRENCH POSTCARDS.

ARTHUR KNIGHT (Filmex Vice President): Professor, USC Division of Cinema; Critic and Columnist, The Hollywood Reporter, Westways. Author: "The Liveliest Art," "The Hollywood Style;" Contributor, *The Encyclopedia Britanica, World Encyclopedia, Collier's Yearbook;* Contributing Editor, *The Saturday Review.*

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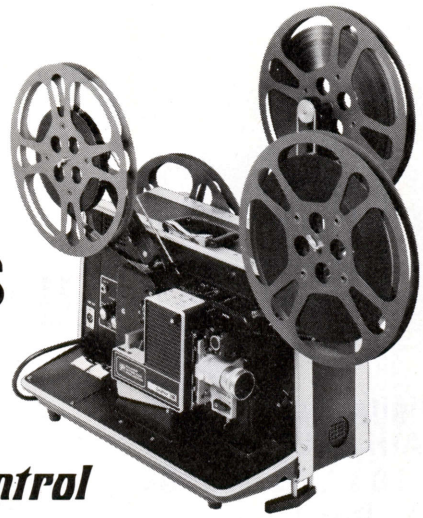

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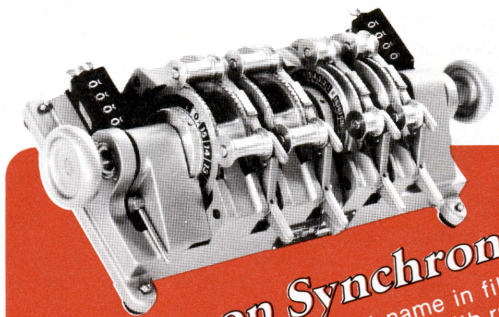

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ALAN LADD, JR.: President, The Ladd Company. Former President, 20th Century-Fox. Responsible for STAR WARS; SILVER STREAK; THE OMEN; SILENT MOVIE; DAMIEN: OMEN II; JULIA; TURNING POINT; NORMA RAE; BREAKING AWAY. Independently produced nine films in four years; began career as agent at Creative Management Agency.

LEONARD LEVY (Filmex Treasurer): Financial Consultant. Presently at work on a Ph.D. in Clinical Psychology. Formerly managing partner of Kenneth Leventhal & Company, Certified Public Accountants; consultant to the Secretary of the Department of Housing and Urban Development, Washington, D.C.

W.M. MARCUSSEN: Vice President of Public Relations, Atlantic Richfield Company; President, ARCO Foundation. Joined ARCO in 1950; served in numerous capacities including Vice President, Industrial, Commercial, and Distributor Marketing. Active in many business, cultural and community organizations.

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WALTER MIRISCH: President and Executive Head of Production, The Mirisch Corporation. President, Academy of Motion Picture Arts and Sciences 1973 to 1977; President, Center Theatre Group of Los Angeles 1976 to 1979. Producer; SAME TIME, NEXT YEAR; MIDWAY; IN THE HEAT OF THE NIGHT (Academy Award, 1968); HAWAII; TWO FOR THE SEESAW; THE MAGNIFICENT SEVEN. Awarded: Irving Thalberg Award, 1978; Order of Arts and Letters (France), 1963.

DR. FRANKLIN D. MURPHY: Chairman of the Board, Times Mirror Company. Member—Board of Trustees, Los Angeles County Museum of Art; leader in many community, business and cultural affairs. Former Chancellor of UCLA.

JACK NICHOLSON: Actor/Director/Writer/Producer. Actor: EASY RIDER; FIVE EASY PIECES; CARNAL KNOWLEDGE; CHINATOWN; ONE FLEW OVER THE CUCKOO'S NEST, Academy Award, Best Actor, 1975; THE MISSOURI BREAKS; THE SHINING; Director: DRIVE, HE SAID; GOIN' SOUTH; Producer: RIDE THE WHIRLWIND; DRIVE, HE SAID; Screenwriter: THE TRIP; FLIGHT TO FURY; HEAD; DRIVE, HE SAID.

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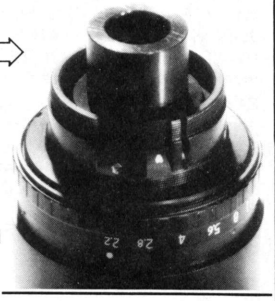

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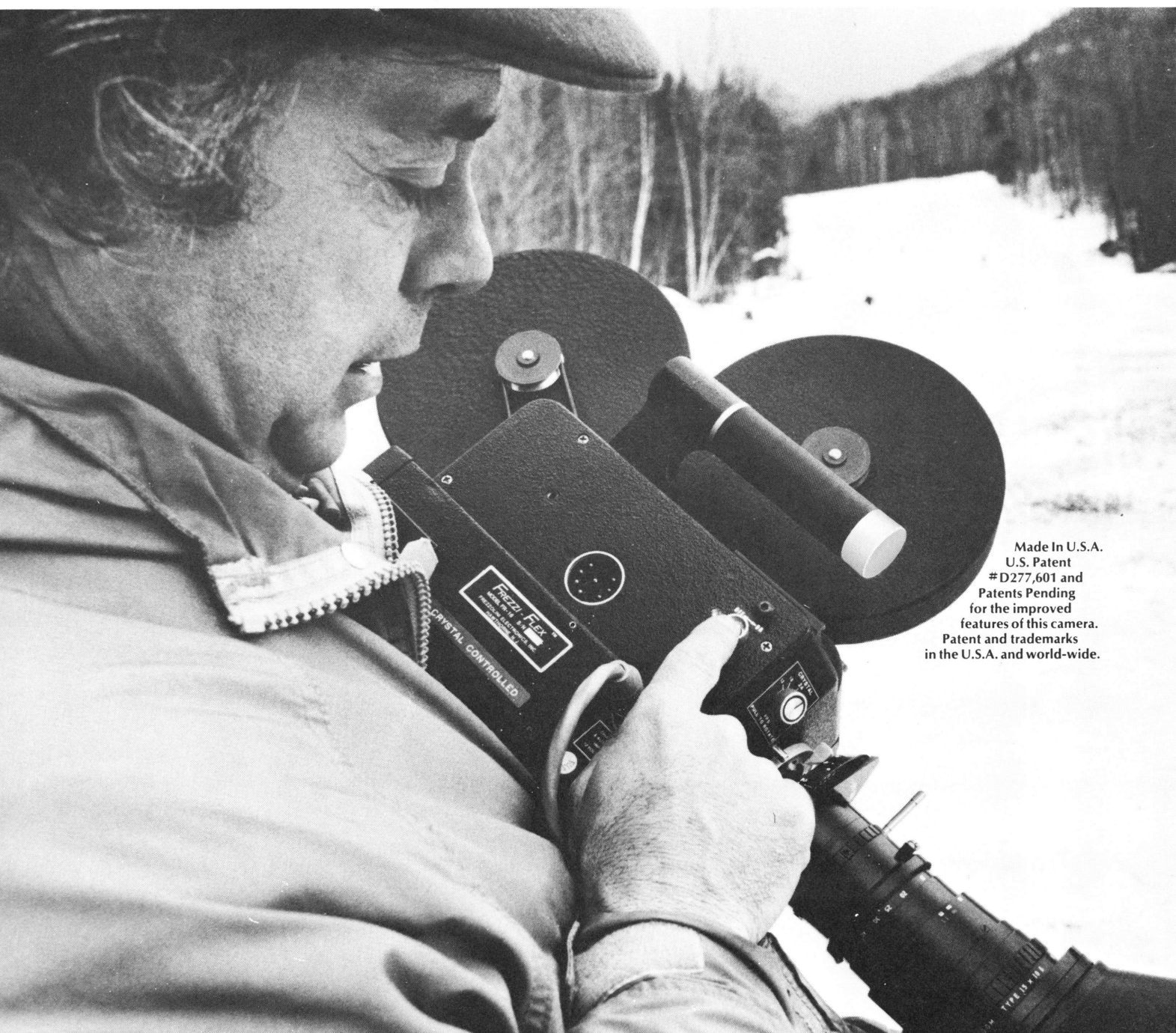

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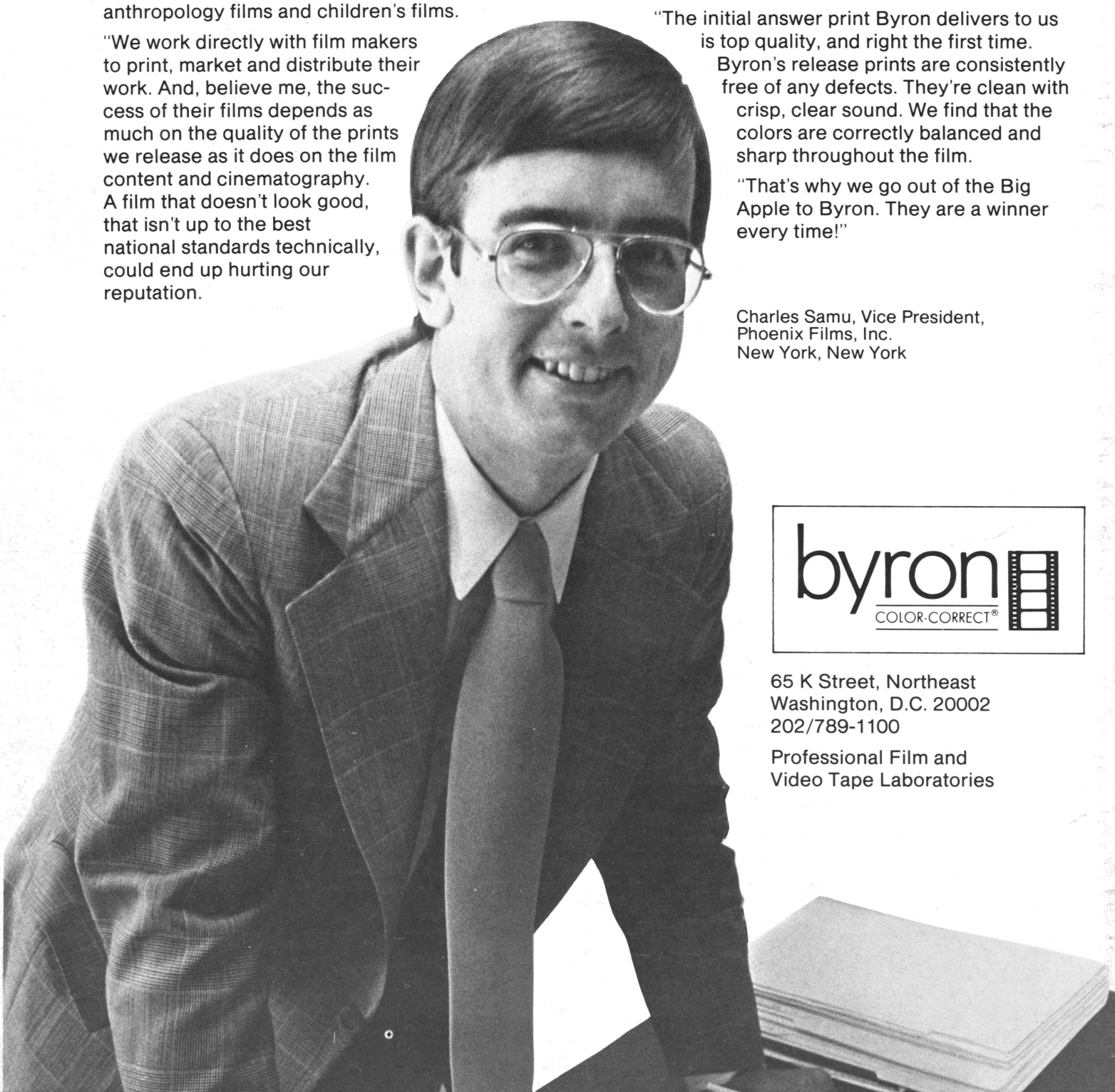

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